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ABSTRACT

This report presents the highlights of a conference held to critically examine the state of education in America and to set goals for the future of education in America. Those participating in the conference included public and private school teachers and administrators, college teachers and administrators, college students, parents, state representatives, and representatives of the Montana State Department of Education. Keynote speakers for the six general sessions were: Ernest L. Boyer, Emeral A. Crosby, Francis N. Hamblin, Lyn Gubser, Lee Noel, and Roxanne Bradshaw. The six general sessions encompassed: (1) a critical examination of American education; (2) future directions for American education; (3) "A Nation at Risk"; (4) the global stakes; (5) increasing student competence--an emerging indicator of educational excellence; and (6) the education reports and future directions. (CB)

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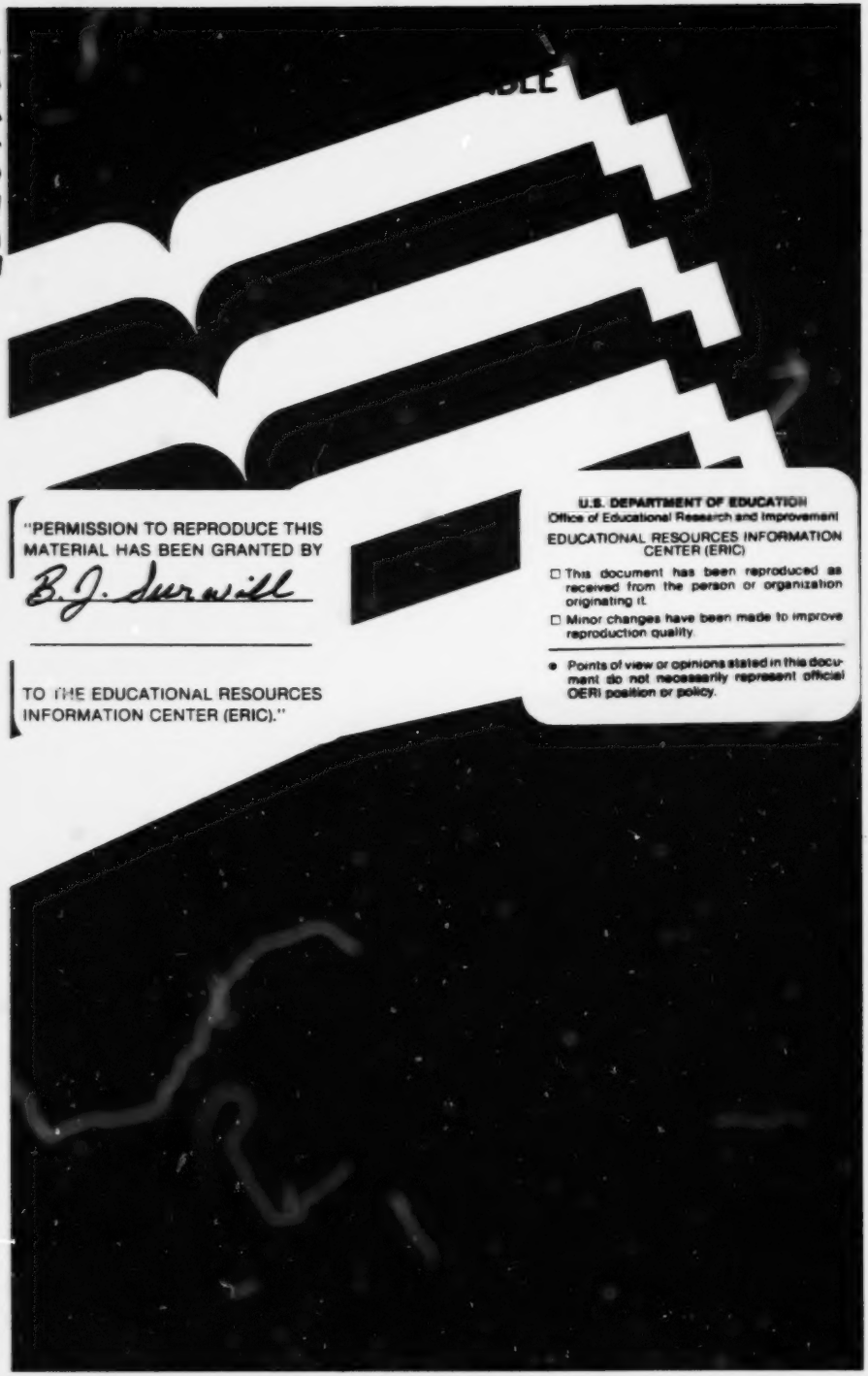

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Preface

A number of events in American education nationally influenced our decision to carry out this conference.

1. In 1980, Paul Simon, U.S. Congressman from Illinois, published the hard-hitting, well-documented book, *The Tongue-Tied American.* Congressman Simon, Chairman of the House Committee on Education and Labor, presented a shocking indictment of American complacency in terms of our distance behind other nations in foreign language skills. In his book he points out that fewer than 4 percent of today's high school graduates have more than two years of foreign language background, and that between 1963 and 1974 there was a 44 percent drop in the number of college students enrolled in foreign language programs. Also of the 11 million U.S. students seeking graduate and undergraduate degrees in colleges and universities, fewer than 1 percent are studying languages used by three-fourths of the world's population. Congressman Simon's book clearly points out that American education has been shortchanging our children, the citizens of tomorrow, who will live with the effect of the schooling we so narrowly designed.

2. An article by Beverly T. Watkins in the March 23, 1981, issue of *The Chronicle of Higher Education* predicted a critical teacher shortage in this country by 1985. She pointed out the great population movement to the west and southwest. Shortages of mathematics, science, and English teachers will be felt nationally. Low salaries for teachers have driven many teachers into new career opportunities that offer much higher salaries.

3. The January 19, 1982, issue of *Education Week* featured an article by Susan Walton pointing out that many industrialized nations which compete economically with the United States provide their school children with significantly more emphasis in the sciences and mathematics than do American schools. For example, not only do Japanese students take more years of science in school compared with U.S. students, but also the Japanese school year is 240 days long compared with 180 days in most U.S. school districts.

Whatever the future of public education in the United States, it is clear that school curricula need revitalization. The public schools have heard the sounds of alarm from the public sector. They would be derelict if they do not answer the call.

4. According to a 1982 Gallup Poll report, *Attitude of the Public Toward Public Schools,* 23 percent of the public polled indicated lack of discipline to be the biggest problem in our schools. The second-highest concern was the use of drugs, followed by poor curriculum and poor standards in our schools. According to the Gallup Poll, American education was in trouble on many fronts.

5. Business leaders in America have pointed out that the American work force is making a dramatic shift away from their role as product producers. Instead, now and in the future, a majority of workers will be required to work with information. This evident change demands

that educators seek new approaches to educating people for that setting. The high-technology society we are now living in requires higher-order skills. Americans must begin now to reassess the entire educational system and develop a curricula that will reflect the needs of our society today and in the future.

I have cited only a few indicators that show, for a multitude of reasons, that the schools of our nation are not leading the way in our society for preparing youth to meet the challenges of our rapidly changing world.

Those invited to participate in the conference included teachers and administrators from public and private schools; college teachers and college administrators from several states, including Canadian educators; parents; college students; prominent television, newspaper, and radio personalities; representatives from the business sector; school board members; representatives from the Office of Public Instruction; state senators; state representatives; the Commissioner of Higher Education; the Chairman of the Board of Regents; and the Governor.

This compendium report presents the highlights of the conference. It was a sincere effort by the sponsors of this conference to carry out a critical examination of American education, and, hopefully, to precipitate action for constructive change in our educational programs at all levels.

Benedict J. Surwill
Dean, School of Education,
Eastern Montana College
Conference Chairperson

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Acknowledgments

I am grateful to the following key people for their advice, support, and assistance:

1. Bruce Carpenter, President of Eastern Montana College, for his complete support in planning and carrying out the conference. Without his assistance and encouragement this conference never would have been realized.

2. Governor Ted Schwinden, State of Montana, for all the assistance and cooperation his office gave to the Conference Planning Committee.

3. Ed Argenbright, State Superintendent of Public Instruction, Montana, for his cooperation and assistance in planning, promoting, and carrying out the conference.

4. Irving Dayton, Commissioner of Higher Education, Montana University System, for the assistance and cooperation he provided in planning and carrying out the conference.

5. Nancy Traeger, Secretary to the Dean of the School of Education, Eastern Montana College (EMC), for her masterful organizational and secretarial skills throughout the year in planning the conference. Her sensitivity and good judgment were vital to its success.

6. Nancy Krekeler, Consulting Editorial Assistant, who cooperatively read and reread the conference draft documents and, after many hours of interpretive meetings with me, took this confusing mass of material and provided me with clean copy.

7. Harry Lee, Assistant to the Dean of Education, EMC, who gave great encouragement and wise counsel throughout the year it took to plan and organize the conference. I am indebted to him for the endless hours beyond the normal call of duty he gave to this project.

8. Victor Signori, Assistant Dean of Students, EMC, for his expressed interest in organizing the conference and for his valuable assistance every step of the way in promoting the conference.

9. Kenneth L. Woosley, Director of News Media Services, EMC, for establishing and maintaining liaison with the news media — newspapers, radio, and television — for reporting the affairs of this three-day conference.

10. The sponsors of the conference for their encouragement and financial support:

Eastern Montana College
Eastern Montana College Foundation
Office of Public Instruction, State of Montana
Montana American College Testing Program
Associated Students of Eastern Montana College
Northern Rockies Consortium for Higher Education (NORCHE)
Governor Ted Schwinden, State of Montana

11. The Conference Planning Committee for the many personal contributions each member made in making the conference run smoothly from beginning to end. It was only because of the teamwork displayed by these people that this conference, hopefully, was claimed to be a richly rewarding experience for all 200 participants. (Planning Committee members listed on the following page.)

Benedict J. Surwill
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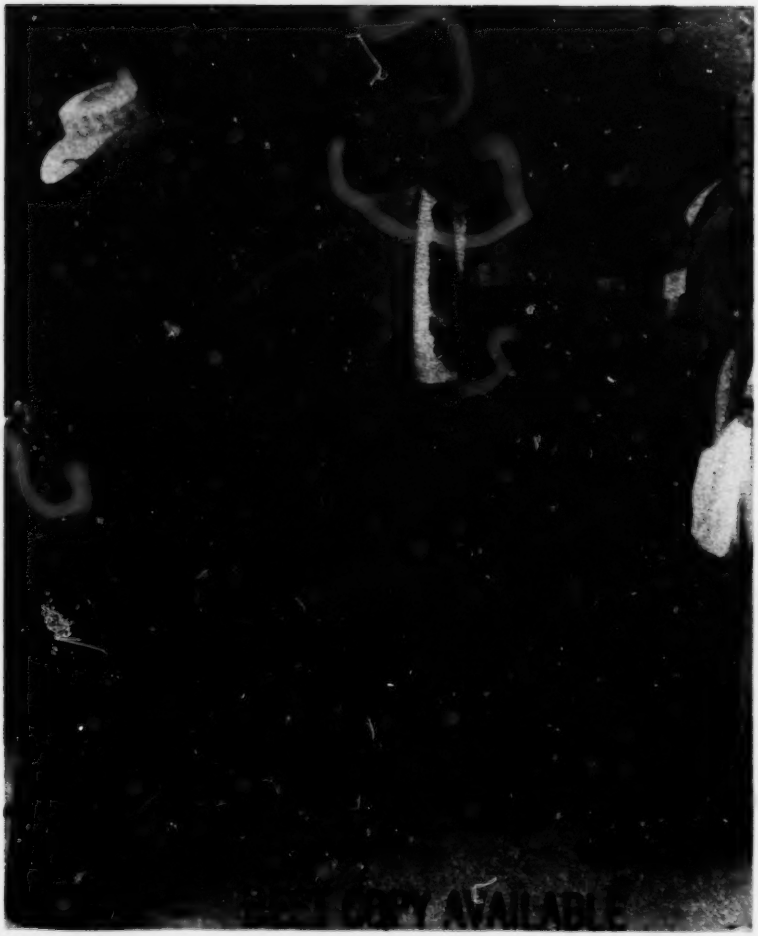
Conference Chairperson



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Kenneth L. Woosley, Director, News Media Services

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Benedict J. Surwill, Dean, School of Education, Conference Chairperson

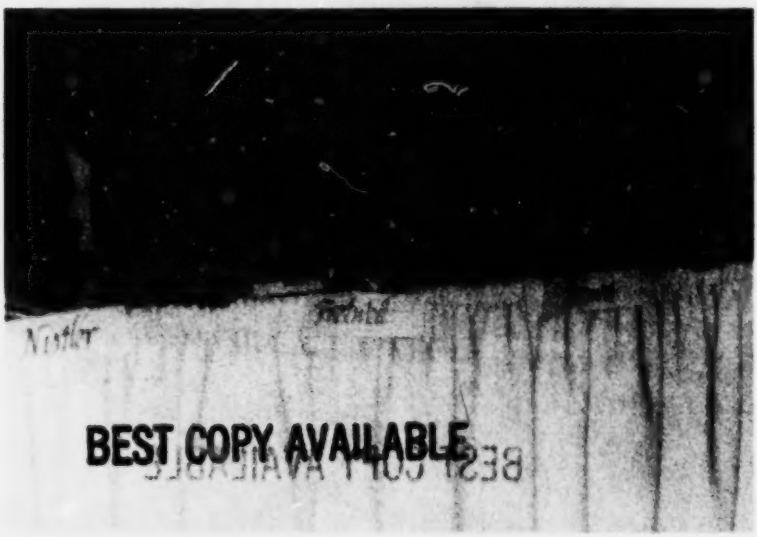
*All Planning Committee Members are affiliated with Eastern Montana College.

Introduction

Bruce Carpenter
President
Eastern Montana College

Beginning in the Spring of 1982, a number of reports were issued that raised questions about the quality of education being provided in our secondary schools and about the quality of the teacher preparation programs being provided by colleges and universities. The 1983 Task Force Report on Excellence in Montana Schools identified some thirty-five cognitive skills necessary for study and work beyond high school. At the national level, a College Board statement on academic preparation called for college competencies in areas similar to those identified in the Montana report. Another report, this one from the American Association of Colleges for Teacher Education, identified the skills needed by beginning teachers. Finally, the report that received the greatest attention in Montana, and indeed nationwide, was called *A Nation at Risk: The Imperative for Educational Reform.*

Those of us involved in the educational enterprise felt that this attention to our schools was warranted, if not long overdue. But as



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welcome as the attention was, and as excellent as the studies were, what we were really seeing was old wine in new bottles. As long ago as 1946 a report from the American Council on Education concluded, "The quality of teachers is, or should be, a matter of deepest social concern. The nation risks its entire future if it entrusts its children to the charge of men and women who are not intelligent, not informed, not skillful, not democratic, not devoted to young people and their own calling. The nation needs teachers who are superbly fitted to their important task." In 1958 the renowned educator, James B. Conant, designed the following high school curriculum for all students: four years of English, three or four years of social studies (including a senior course in American problems or American government, and two years of history, one of which is American history), one year of mathematics (either algebra or general math) in the ninth grade, and at least one year of science (either biology or physical science) in the ninth or tenth grade. This program, Conant said, "means that a course is given five periods a week throughout the academic year, involves nine or ten courses with homework to be taken in four years, and occupies more than half the time of most students, whatever their elective programs." While the concerns we face today might not be new, the need to address them remains no less urgent.

With that thought in mind, this conference, A Critical Examination of American Education: A Time for Action, was convened to address some of these concerns, formulate a plan of action to move forward with the changes necessary to provide our students with a solid foundation of learning, and to formulate a plan for the improvement of teaching at all levels. What follows are the proceedings of that conference.

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Introductory Remarks

Ted Schwinden
Governor
State of Montana

We are here to examine in a critical and constructive way the state of American education. Like with reading a book, we really need only to open the topic and to read. In our pursuit of knowledge about American education, I think the book has been opened for us most recently, over the last year or so, as more and more national interest has been focused on the subject in terms of both a plethora of reports and a great deal of national concern on every level.

The book that we will be looking at over the next several days contains the information that we need for beginning to address the legitimate questions that are being raised about the American educational institution. We need to read it, but more importantly, we need to act. That is the key concept of this symposium, called A Critical Examination of American Education: A Time for Action. From a political point of view, I see this as an appropriate time for action in American education — not because the experts say so, but because of a combination of events and forces that have occurred and

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that are now occurring. I think you and I know that dust blankets rows and rows of past studies, reports, blue ribbon findings, and other recommendations on education. But during the last year and a half, each new report on education has been met not so much with indifference or apathy, but with genuine interest and legitimate enthusiasm. A combination of scholarly findings, political interest reaching to the White House level, a general sense of uneasiness among educators and students and the public, but most of all a shared sense of urgency throughout the nation have led to the national conviction that education in America is not what it could or should be. Some, I suspect, would say that education in America "ain't what it used to be." But I think you would agree that nothing else is either, and that the purpose of a critical examination of education in America is not to return us to the ways that things used to be. Certainly if we have lost some of the useful practices of the past, we ought to reinstate and reemphasize them. But our focus really ought to be on progress and the future, on doing what we can as people, as experts, and as laypersons who are interested in making education meet the demands of the world and society in the years ahead.

The time is ripe to act. But this most welcome attention on education is going to be an opportunity lost if we think in terms of a quick fix or easy solutions. As Governor, as one who has to deal daily with the need to set priorities, I am convinced that we are never going to solve all the diagnosed ills of education. The reason is that the patient is just too dynamic. He or she doesn't stand still when you talk about education in America. Unanticipated problems are going to arise all the time as we treat the symptoms of the education malaise. The competition for public resources will inevitably limit the scope and number of problems that can be addressed.

What I think we can do together is two things. First, we can come to some kind of an agreement on the purpose of American education, including an understood description of the abilities and the knowledge that our newest generations are going to need. Then we can decide which of those can and should be provided by schooling.

Second, we will have to provide specific proposals for improvement in local schools that will achieve the national kind of purpose to which we have agreed. Those who make the decisions about education at local levels can fit their programs within those guidelines. I am sure that these two points are going to figure very much into our deliberations during this conference.

Dr. Boyer made a point in his excellent book, *High School: A Report on Secondary Education in America*, that there is a genuine thirst among the nation's teachers for all kinds of help. School board trustees, legislators, state boards of education, and governors also thirst for help as we ready ourselves to act on educational issues. We need to keep the debate about education going. It ought not to be a two-year phenomenon. We ought to keep new ideas flowing. We ought to keep identifying needs and the obstacles that prevent satisfying those needs. Perhaps, most importantly — and I say this as a Governor, not as an education expert — we have to keep up and

expand the essential work of building public interest in what happens in education.

At the conclusion of this conference, I hope that you bring your findings, your recommendations, and your skills of persuasion to every kind of forum of decision making where educational improvements will finally be adopted, because in the long run education will be exactly what the people of this country want it to be. By that I don't mean to imply that government is where the decisions are made. Your influence with teachers, administrators, schools of education, students themselves, and their parents is the most likely to produce the most good. Government is also obviously going to be involved in this national and state and local quest for excellence.

Another one of Dr. Boyer's observations was that state law books are already cluttered on the subject of education. To quote him, "State education laws should be modest and general, answering a few basic questions." I checked, and the educational entitlement in the Montana Code runs for 357 pages. I would call that something other than modest and general. Maybe general, but not modest! We ought to keep that in mind as we seek to improve our system of education.

In conclusion, let me simply reiterate that we do currently have a unique window of opportunity in terms of taking action in the area of education. It is time for those who run college programs to act, and in our state we are seeing some heartening signs in that direction at the level of the regents. It is time for the administrators and educators of public and elementary schools to act, and it is time for those in government to act. Your advice and your recommendations are needed, and they will be most welcome. We look forward to your counsel.

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First General Session

A Critical Examination of American Education

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A Critical Examination of American Education

Ernest L. Boyer
President
The Carnegie Foundation for the Advancement of Teaching

Introduction

I am convinced that this beautiful state is precisely the place to be looking at American education, since in Montana you can see forever.

It has been just about one year and sixty days since the National Commission on Excellence in Education said the nation was at risk. Then about fourteen months later the President of the United States assured us that suddenly the nation's public schools were being fixed.

The truth is, of course, that our schools were never quite as bad as the hyperbole "nation at risk" would suggest. Indeed, after we at The Carnegie Foundation completed our own study of the American high school,* in which we spent about 2,000 hours in high schools from coast to coast, I became convinced that the nation's schools deserve not just F's, but A's as well. Further, I became convinced that

*The Carnegie Foundation for the Advancement of Teaching, *High School: A Report on Secondary Education in America* (New York: Harper & Row, Publishers, 1983).

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most school critics could not survive one week in the very classrooms they so eloquently condemn. Also, I concluded that in at least some communities, the public school is the **most** stable, not the **least** stable, institution in the culture.

We are constantly being told that the Scholastic Aptitude Test (SAT) scores started to decline in the early 1960s. How many times have you seen that toboggan slide cited as a condemnation that somehow public education in this country has become vulnerable and diseased? What we are not told in the process is that during this same period, every institution in this nation was being battered and abused, and that it is enormously inappropriate to select one institution and give it a report card without also looking contextually at the circumstances that surround and inevitably impose on its future health.

During the 1960s I spent most of my time in higher education, and during that period I was locked in and out of my office, I was shouted down by students, and I was spending time into the wee hours of the morning deciding whether to call the state police. I must confess that in the dark hours before dawn, it did not occur to me to check the SAT's. Indeed, and I say this in full seriousness, I wish I did have an SAT score on higher education during the decade of the 1960s. In fact, I understand that the National Institute of Education soon will release a report on colleges that will provide some data about what happened to Graduate Record Examination scores.

I also wish, having spent some time in government, that I had a report card on the Congress of the United States. I wish I had an SAT on the nation's families or on the nation's courts. I take no comfort in what I am trying to suggest. I only make the point that, in the larger sense, a report card on the nation's schools is a report card on the nation. In the fifteen high schools that we studied in cities and rural areas from coast to coast, it was very clear to me that if you tell me the condition of the family and the home and the community, I will give you an absolutely vivid and I think generally accurate comment on the quality of education.

On the other hand, we are not looking for scapegoats or excuses. If I thought that all the dilemmas and problems of public education were contextual, I would not be with you today. We prepared a report on the American high school because I believe that part of the problem lies within the institution and not beyond. I should like to set forth six general convictions about the quality of the nation's public schools, and if I might use the term too glibly, how they might be fixed.

Priority to Critical Thinking and Mastery of Language

First, the Carnegie report concluded that if we are to achieve excellence academically, every school must give top priority to critical thinking and to the mastery of language. I frankly was somewhat disappointed by the tone and mood of the debate following the issuance of *A Nation at Risk;* the debate cast the urgency of school renewal in a competitive international high-tech race and suggested that the answer to school renewal lies in increasing math and science. I do not wish to be misunderstood. We are facing urgent and successful

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competition. We are, in fact, in a technology revolution that I think will reshape our lives forever. The debate confuses what I believe to be the specialized and generalized problem of public education. It is my view that not all our children are going to be high-tech engineers or advanced scientists to help us with creative breakthroughs. I do believe, however, that every child must essentially become skilled in the use of language, and that, to me, is the central and general obligation for all students.

In the report we say that language is not just another subject. It is the skill by which all other subjects are pursued. I am convinced that failure to deal skillfully with the use of the symbol system, especially in the early years, has probably been as important a pedagogical failure as any other I can name. I understand full well that language development begins long before the child moves on to formal education.

Kay, my wife, who is a certified nurse-midwife and delivers babies, insists that language begins in utero when the unborn infant monitors the mother's voice. I happen to believe that my wife is right, but for the skeptics in the room, I must insist that language certainly begins with the first breath at birth as the new life, first with gurgles, and then with crudely formed phonemes, and then with utterances we call words and then sentences, begins to convey subtle shades of meaning, feelings, and ideas. I have to tell you that I am absolutely overwhelmed by the magic and the mystery of this process we call language which we, I think all too casually, accept as we do breathing. In my judgment it is what makes us truly human. To me it is the centerpiece of learning. For that reason, our report states that the first goal of education is to help all children become confident in the use of language.

I do happen to believe that children who can speak and listen can read and write because through speaking and listening they demonstrate their understanding of the symbol system. Writing is simply adding visual squiggles to a process already profoundly well in place. Yet when children come to school they are treated as if somehow they are linguistically incompetent, although they are already fully empowered to use the symbols that are there. I think that every school should begin to build on the process that, through natural and environmental circumstances, has already been well established.

If I could indicate my reasons for optimism about public education in the days ahead, it is precisely because we are getting smarter about early language development. As I see the combination of brain research, new technology, and our more sophisticated understanding of definitions of intelligence, I happen to believe that the next ten to twenty years will be marvelously exciting in breakthroughs toward school improvement, precisely because of our more confident and imaginative understanding of language in the early years. The early years are overwhelmingly the most important. If we do not establish confidence in learning in those early years, our compensatory education, while essential, will never overcome what I think is a process that is readiness-linked. Language not developed in the early

grades can never fully, in my judgment, be recovered later on.

I must pay tribute to my first grade teacher. About a hundred years ago I walked to school with my mother on the first day of school, and on the way I asked my mother if I would learn to read. I have often thought about that because I do believe that children go to school to learn to read. Their hope is to learn those funny symbols so they can discover what all the adult mysteries are about. My mother quite wisely said, "No, you won't learn to read today, but you will before the year is out." But my mother did not know Miss Rice, my first grade teacher, who stood at the school room door, half human, half divine. In fact, for months I just assumed that she ascended into the clouds each evening and then descended each morning to teach the class. To add to the mystery, she was called a maiden lady. A hundred years ago it was against the law in Dayton, Ohio, to teach and be married. It had something to do with mixing business and pleasure. I never fully understood.

In any event, Miss Rice stood in front of twenty-eight frightened, awestruck, anticipating children and said, "Good morning class. Today we learn to read." The first words I ever heard in the classroom. Now, no child in the class said, "Not today. Let's string beads." If Miss Rice says you learn to read, you learn to read. I think children come to school anticipating something very new and very special. For all too many, for the first days and weeks, those high aspirations are diminished. Students settle for the humdrum, never having been fully challenged to stretch themselves and become something very special. Miss Rice said we would learn to read. We spent all day on four words — I go to school — and that evening I ran home ten feet tall and whipped a crumpled piece of paper from my pocket and said to my mother, "I learned to read." Then I recited, "I go to school." I guess candor requires me to admit that I didn't actually learn to read; I learned to memorize. But Miss Rice had taught me something much more essential. She taught me that in our search for excellence, reading is the key.

The Carnegie report also gives top priority to writing, which, I believe, is the most important and most neglected language skill. We visited classes from coast to coast and found that months, days, and weeks went by in which children were never asked to write anything more than their names at the top of a piece of paper and then put check marks or true-false answers on the paper. Even chimpanzees can be trained to do that! I urge writing, but not because we live in a writing culture. In fact, our culture now is oral. Instead of writing thank-you notes to our friends and neighbors, we call them on the phone. We talk a lot. We don't write a lot. My writing is limited heavily to signing my name on the bottom of credit card receipts. That's the writing in our culture. I am convinced schooling cannot neglect writing, because it is through clear writing that clear thinking can be taught. Writing is frozen thought. It is the means by which we expose what is or is not in our heads. As we express ourselves, we are able to discover precisely whether we think clearly or obliquely. It is through our speech and writing, through self-expression, through mentoring, that it is possible to improve the

quality of our thought.

To do that, however, teachers have to have the time to critique, analyze, and carefully assess the quality of writing. When teachers have 130 children on a given day, to give children a writing assignment is just to blow another weekend. Then, if days go by before a child gets back responses to his or her writing, it is almost worse than if he had not done the assignment in the first place. I suggest, then, in our report that writing should start in the first weeks of school. I happen to think that children should be encouraged to write before they learn to polish spelling and syntax, instead of the other way around. We will drill and drill and drill and tell students that since we have all the subtleties worked out, we are going to start the process of writing. In fact, the system should be inverted. The scheme we use now is much like saying we are going to make you a perfect bicycle rider and then you can get on a bike. You learn to ride by riding. And you learn to write by writing. And you write those experiences that you fully understand. I am a believer in writing starting in the earliest years of schooling.

I also believe that every child who comes to high school should have his or her writing language skill assessed. Not to keep him out of high school, but to have some baseline for understanding what yet needs to be done in order to develop this essential skill. Our report recommends that every student, before he or she graduates from high school, should be asked to write a thoughtful, coherent statement on a consequential topic. If, after twelve years of formal education, students cannot write English prose with clarity and conviction, then I suggest we lock the doors and start again. That in my judgment is the minimum we should expect from every child.

I am often asked how to assess the quality of a district or a school. The main method I would use would be to ask the students to write an essay. Through a careful critique, I think I could give a fairly good measure of the quality of the education. The essay would tell me whether students have information and whether they can use it across the disciplines and relate it to an issue of importance to their lives. In the end, that is what education is all about.

I have to add a footnote about the centrality of language. Our students should understand that we communicate not just with words, but in nonverbal ways as well. There are, in fact, feelings and ideas that can be conveyed only through music, dance, and the visual arts. Indeed, the definition of civilization in my view is the breadth of the symbol systems that any culture uses and cherishes and sustains. It is no secret that when dictators wish to control the hearts and minds of men and women, they censor not only speech, but art as well. They understand that art too can powerfully convey feelings and ideas, sometimes more effectively than can our words.

I was surprised by a recent story in the *New York Times* in which Victor Weisskopf, a Nobel-Prize-winning physicist, a stunning scholar and scientist, said that if you truly want to understand the "big bang" theory — which I don't pretend to understand — listen to the works of Haydn. I was absolutely overjoyed. Here is an international

physicist saying that to understand one of the most complicated issues in scientific theory, don't listen to a scientist speak, listen to the works of Haydn, and you will get an insight as to the intuitions behind the theory.

Here then is my conclusion: Excellence in education is measured not by the SAT, but by the mastery of language. If I had one wish in our search for school renewal, it would be that every child during his or her first day of school would hear some teacher say, "Good morning class, today we learn to read."

The Curriculum Should Provide a Core of Common Learning for All Students

In our report we also say that we must use language toward certain ends. Language is not an isolated vacuous exercise. It is the means by which information, ideas, and feelings are conveyed. We live in a social culture. For that reason a second conclusion of the Carnegie report is that we need a core of common learning for all students. We recommend that two-thirds of the high school program should be required, not to preserve the academic disciplines, but to promote a common discourse in our culture. While I do agree that we need education for international competition, I must insist that in the end education, as Jefferson put it, is for civic understanding. While we live all alone, we also are all connected in a culture; and that means that there must be some commonness of understanding in order for us to communicate with each other. The notion that there are no points of connection has been terribly distorted and leads to a destructive view of education. I suggest in our report that all students need to study the human heritage, to understand through civics our social institutions, and to understand the richness of literature and the arts which make us truly human. We also say that it is urgent that we understand nonwestern cultures because we live in a dangerous and interdependent world.

During our study of the American high school I was startled to discover that only two states in the nation mandate a course in nonwestern cultures. In the 1960s, I read that a survey of American high school students revealed that 40 percent of them thought Golda Meir rather than Anwar Sadat was President of Egypt. In a more recent survey, one out of four college seniors said they had "almost nothing in common with people in underdeveloped countries." A news story several months ago reported that a large percentage of students in California community colleges could not locate either Iran or El Salvador on a map. I am both amused and appalled by what I think is the massive ignorance about the nature of our world among our children and our students, who somehow must guide the destiny of our planet into the year 2000 and beyond. I think it's significant that during 1983, in addition to all the reports on education, three other major statements were released. One of these, by the National Academy of Sciences, spoke about the so-called greenhouse effect — the gradual warming of the earth's atmosphere because of an increase of carbon dioxide in the air. Another report by an equally

distinguished group of scientists predicted that nuclear holocaust could plunge half the earth into freezing darkness. A third report released by biologists said that many living species now face extinction because of deforestation of the tropical forests, where over 60 percent of the earth's animal and plant life reside. Tropical forests are being destroyed at the rate of about 100,000 square kilometers every year. I do not suggest either a doomsday or a Buck Rogers core curriculum for our schools. I must confess, though, that in the quiet hours before dawn I wonder how our current push for excellence in education relates to the urgent global issues the coming generation will inherit.

The question that I leave you with is this: Will our education become increasingly parochial at the very moment the agenda is more global? I worry that we will be smugly content with adding some vacuous label, such as Carnegie Unit, without asking, "What is it we want our children to know and understand about the world they will inherit?" With all our debate about education, I must say with sadness that the question is not being seriously addressed. I am suggesting, then, that our students, through a core curriculum, should discover those connections that hold us all together, not just in a natural sense, but in a social and civic sense as well.

Provide Electives for Discovering Aptitudes

A third objective in our report moves to the other end of the spectrum. While we urge recognition of our connections, we also recognize that all students should discover their own aptitudes and interests. They should learn their language, and they should complete a core curriculum so they can have discourse with each other. They should also develop a sense of worth as to who they are and what they would like to accomplish. Our report thus calls for electives, carefully selected in order for students to begin to discover their own special aptitudes and interests.

As a footnote I might say that there is no one in America I admire more than Mortimer Adler, a good friend, and I did participate in the panel that shaped the Paidea proposal, which has been seriously discussed. But I have to say, in openness here, as I did in the quiet of the panel, that I disagreed with its recommendation that all electives be abolished and that all vocational courses be denied. I believe that high school is a period of discovery. One purpose of electives is to help students determine their interests, who they are, and how formal education can connect with their future goals and aspirations. I am a believer in electives — not to fill out the graduation score card, but to help the individual begin to discover who he or she is in looking toward the future. That discovery process, however, must be built on a core of common learning.

Further, I don't oppose vocational education in the high school. I do oppose, however, the careless labelling of students and the closing off of options. One of the sadder parts of our study was to discover that in many high schools we visited, some students were labelled "academic" and others were labelled the "voc-ees." The vocational

students very often did not complete a core of common learning, and too often they were academically neglected. One teacher said to us, "Don't bother preparing anything for the 'vocational kids'; they don't even belong in school. Those kids needs boxing gloves, not books." A direct quotation. In the Carnegie report we say that putting students into boxes can no longer be defended. To call some students academic and others not academic, I believe, has a profound, powerful, and in some instances devastating impact on the students. In all too many schools we say to students, "You are divided between the thinkers and the workers." As I look at life, it is for all of us a blend of both. I assume all of us are thinkers, and I assume all of us are workers. Yet in our schools we will say to the academics, "You are the thinkers, not the workers," and to the vocationals, "You are the workers, not the thinkers." It tells a terrible mistruth to both groups of students.

It seems to me that choosing a vocation is one of life's most crucial choices. In the Carnegie report we say that all high school students should participate in a seminar on work.

What is the path to excellence? In my judgment it is a mastery of language, which is the tool of all further learning. It is a core curriculum that gives us a common discourse and a memory and a future. It is experience to discover our individual aptitudes and interests with good guidance. And it is good teaching.

Reward Excellence in Teaching

We urgently stress the centrality of teaching as a fourth emphasis of our report. We call teaching the heart of the matter, and indeed it is. It's embarrassing for me to say here so late in human history that excellence in education means excellence in teaching. But that's what it's all about, and that issue has been tremendously neglected. You won't be surprised that in our school visits we discovered that the basic teacher problem was not salary or merit pay, the President notwithstanding. The basic teacher problem that we found was the loss of status, the feeling of burn-out, the day-to-day irritations that cause the job to be demeaning.

While we are looking for cosmic solutions to education, in my judgment the simple answer might be to start by saying thank you to a teacher. It doesn't cost a dime. It might save a great teacher for a generation yet to come. When I was Commissioner of Education, one of the last activities I sponsored was a day-long seminar with high school students from across the country. The program was enormously rewarding, but near the end of the day I asked the students, "How many of you have had a teacher who has truly changed your life?" Every hand went up. Then I asked, "How many of you have ever thanked a teacher?" Not one hand was raised. One of the young women, rather embarrassed, said, "Well, you see, it's not the thing to do." I said, "You have just defined the nature of our problem in this nation. We expect people to engage in heroic acts and, by your own statements, even to shape our lives forever; yet no one considers it appropriate to express simple gratitude." And I asked, "How many

of you would go into a classroom day after day, week after week, month after month, work diligently with young people who stared at you as if you were brontosaurus warmed over, and then walk out and never get a signal of response or gratitude? You can't expect that from another human being."

Nor am I impressed by parents who say there is nothing for them to do. I say, "How long since you have written a note or expressed thanks to a teacher who helped your child, or gone to the school board and stated it directly to the public?" Conditions we saw while conducting our study were simple and well known: too many students, too little time for preparation, too much paperwork, and too many mindless interruptions.

I have to tell you that I concluded that the public address system is a symbol of all that has gone wrong with public education. That idiot box interrupts without warning in the midst of a lesson to announce that Billie should pick up his lunch money which is now in the central office. Nonsensical trivia such as this causes the teacher, in my judgment, to conclude that when all the logistics have been worked out we will go back to teaching, to say nothing of what it says to students who are trying to decide whether they wish to be teachers.

I was in a class where within fifty minutes the PA system belched out three different times, and I concluded that, my pacifistic inclinations notwithstanding, if the teacher had announced to the class she was going down to find the body behind the voice, I would have marched enthusiastically with the crowd and watched him twist slowly in the wind. I was talking to a group of teachers about PA systems coming on without warning, and one teacher said, "Well, that's not true at my school." She said there the principal blows into the speaker before he gives his announcements. So she was fully warned. Another one said that "for eighteen years the principal has said, 'Good morning, people, this is Mr. William Jones, your principal.' For eighteen years he has told us his name. We ought to know it by now." Nineteen eighty-four would be a marvelous year to unplug all the PA systems, in answer to the Orwellian inclinations that may be overtaking us this year.

The point I am getting to is really central. I am suggesting that we must think of ways to give empowerment — and I choose that word carefully — empowerment to teachers. There must be a sense of dignity and recognition for a job well done. One of my favorite recommendations in the Carnegie report is called the Teacher Excellence Fund. Every school should have a modest amount of discretionary money with which teachers who have a good idea can be quickly rewarded, whether with another piece of equipment, a field trip, or a lecturer who might come to enrich the class. Symbols of involvement with dignity, it seems to me, are absolutely crucial. I know what many say. What about the bad teachers? Time and time again I am asked by news reporters, "How do we get rid of bad teachers?" I can only say, "Wrong question." The first question is how to reward the good ones. No institution is enriched by being preoccupied with what's gone wrong. You must always start with what's gone right and start spiraling the system upward. If you

preoccupy yourself with negative signals, I can only say you are starting the system downward, and that process becomes pathological, just as if one's own life is preoccupied always with failure. It seems to me we move from success to success as we honor and recognize those who achieve the standards that are defined. I say to the newspaper men, "I don't read that you make national announcements of the reporters who have failed. You have Nieman Fellowships, you have Pulitzer Prizes for those who have done successful work. So it is with teachers."

Awaken a Sense of Service Within Students

Now a word about students. I must say that when we finished the report I had a sense of anxiousness about the young people of this nation that went beyond questioning schools. I concluded that we have not just a school problem, but a youth problem in this nation. Time and time again we heard young people say that they felt neglected by their families, unneeded by the community at large, and unconnected to the larger social context. And that is a pathology that affects the school as well.

To put it as simply as I can, we have a younger generation that generally feels socially adrift. The high school is about the only place where they feel it is OK to be a teenager in our culture, except perhaps in the shopping malls, where they can wander around for days and never be noticed by adults. In our report, we propose a new Carnegie Unit, a term of voluntary service for every high school student, a term of service for the weekends, the summers, and the evenings, a term of service in hospitals, nursing homes, art galleries, or perhaps schools themselves. It is curious to me that we found young people not feeling any sense of responsibility to the school as their institution. They said they went there to meet their friends, but they do not see it vitally as "their place." Is there some way for young people to see the school as theirs, to take more responsibility and more pride in the institution that should belong to them? We chose this voluntary service not just out of a casual passing notice; we did see schools where young people were seriously engaged in both public and private institutions.

I'll never forget a conversation I had with a strapping six-footer who had volunteered that past summer in an emergency ward at the local hospital. He said that they admitted a young girl, a three-year-old who had meningitis, and the next morning she died. Then he looked at me, a hard cold look, and asked, "Have you ever seen a little kid die?" He had grown up and wanted to know if I had. A sixteen-year-old had, in my judgment, taken a quantum leap toward maturity. I am not being sentimental. I am saying there is something seriously wrong with a culture that has young people who for fifteen and twenty years feel somewhat unconnected to the community and the needs that should be met. We cannot, I think, have healthy schools with sickness among the young; and it is my conviction that our students urgently need a sense of mission.

One of my favorite verses is by Vachel Lindsay, who wrote on one occasion, "It's the world's one crime that babes grow dull. Not that

they sow, but that they seldom reap; not that they serve, but have no God to serve; not that they die, but that they die like sheep." I really do wonder if we can build a connection between the energy and the altruism of the young and those who urgently need help. I understand that circumstances may differ from district to district and from region to region. I can only tell you that in many high schools we saw our children feeling unwanted and unrelating to the world of which they are a part.

The Key to Excellence is to Give Support to the Principal and to the Local School

I am convinced that the nation's schools will not be saved by reports from national commissions. Excellence cannot be mandated by state committees. Schools will not be renewed by experts on leave from Mount Olympus. The key to excellence, I believe, is in the end to give support to the principal and to the local school. Every study that's ever been done on education says you need a leader, someone who can inspire and direct the institution, someone who has both confidence and vision. And it is interesting to me that today the corporate world is searching for excellence. The new popular book, *In Search of Excellence,* says that to achieve excellence in the corporate world you need to have a clear goal, and you need to give recognition and reward to those who do the work. Productivity, they are discovering, cannot be dictated from the top. I worry that in our current push for school renewal we will add more Carnegie Units, we will add more rules and regulations, but in the process, we will have suffocated the teachers and the principals, those who in fact must deliver in the end.

As a follow-up to our own study, we announced a school grant program to give principals a little discretionary money to exercise leadership at the local level. The amount was $3,000, which, considering the school budget in this country, is only a pittance. What startled me was that within four weeks, over 10 percent of all the high school principals in the country applied for that small grant which would give them a small discretionary fund to become a leader at the local school. The truth is, most schools don't have a dime with which to exercise leadership. I talked to a principal in Philadelphia about two months ago. He said he has $40 of discretionary money, which is the profit from the Coke machine. He uses it to buy coffee for the teachers at their meetings and for parents when they visit. I am not talking about money here. I am talking about symbols of dignity and authority and the leadership we need. If we think we can fix our schools by more directives from the top, we fail to understand that in the end education is a human enterprise that will stand or fall by the quality and the dignity of those who do the work. At the same time, I recognize that leaders themselves must keep perspective and have confidence in what they do. We noticed that the principals seemed always to be in perpetual motion, facing endless distractions.

Here's how one principal described his day. "Generally, I am working on four things at a time. I have two students in my office to reinstate, and then I get a call telling me there is a fight on the

third floor. As I move upstairs, a teacher confronts me about a problem she is having, and by the time I reach the third floor, the fight is over. Meanwhile, I haven't reinstated the students in my office, and what have I accomplished?" There is an enormous bombardment of pressure on the principal, who is trying to negotiate the work in a local school. I do hope we can urge our principals to have not only dignity, but also perspective. I don't mean that we should go through life as unfeeling robots, but rather I suggest that we work very hard to keep life events in full perspective.

I had been Commissioner of Education for about two weeks and was on my way to a crucial meeting. As I left the office, an assistant came down the hall and said the White House had just called and wanted a report on how I intended, as the Commissioner of Education, to stay in touch with the American people. Well, I said, we would get together tomorrow and we would summarize a plan on how I intended to stay in touch with the American people. Then the aide said no, we couldn't wait until tomorrow because the White House wanted my report by close of business today. I said, "Tell them that I am on my way to meet some American people right now." That's the only answer I could think of.

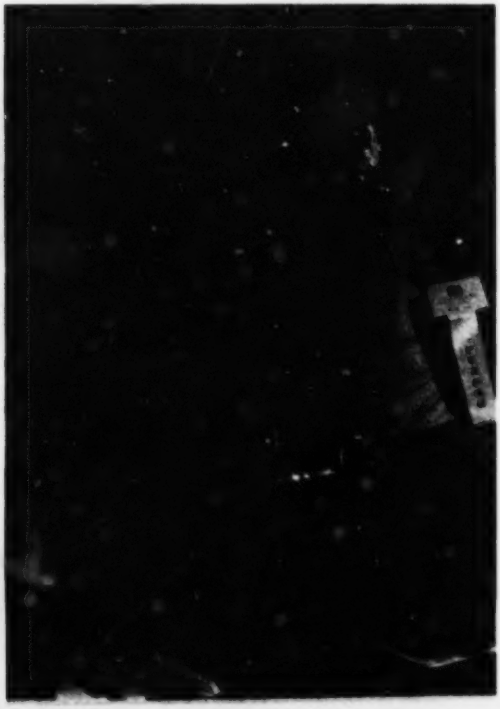
Several years ago our family was moving from Albany, New York, to Washington, D.C., and while I was packing late at night I discovered some press clippings from my days as Chancellor of the State University of New York. The papers were yellow and quite faded, the kind of stuff an aging Ziegfeld girl may have tucked away nostalgically in her top dresser drawer. What really caught my attention were the headlines. I saw front-page stories that at the time had caused anguish. But now, just a few years later, I could barely recall what all the hubbub was about. As I saw those faded stories it occurred to me just how much emotion had been wasted. I am really talking to a point that I think is most crucial. The quality of leadership in the end is most essential, and our schools can be no healthier than the perspective and vision and priorities that leadership affirms. If we are caught always in the thick or thin of things, there is no way our schools can establish and sustain a larger vision.

The Path to Excellence in Education: A Summary

In a search for excellence, I have some very simple notions to propose. I would give priority to mastery of language, which is the tool of all further learning. I would offer a core curriculum to give students a common discourse on our culture. I would encourage some student independence through electives. I would reward excellence in teaching. I would try to awaken a sense of service within students, and I would try to reinvest leadership with both vision and perspective. Above all, as we continue this debate about excellence in American education, I think we must reaffirm our commitment to all students and not to just a privileged few. If we end up with more of our students feeling left out and frustrated, then this great debate for excellence will have left this nation more impoverished. That we cannot allow to happen.

I don't know how many of you saw William Buckley's TV program, "Firing Line," several months ago when Mortimer Adler was his guest. Mortimer was arguing for excellence for all, as he does. Near the end of the show Buckley, who remained a skeptic, finally put it to him and said, "Mortimer, what makes you think all children can learn?" And Mortimer, never at a loss for words, said, "Well, Bill, I am not confident that all children can learn, but on the other hand, you are not absolutely confident they can't. So I would rather live by my hope than by your doubt." And I thought, "Bravo!"

There is no way that we can guarantee that we will be wise enough to educate all our children superbly well. We're human. We may miss the formulas that are effective. I only know that the moment we start shaping public policy based more on doubt than hope, the future of this nation is imperiled. One of my favorite authors is James Agee, who wrote on one occasion that with every child who is born, under what ever circumstances, the potentiality of the human race is born again. It seems to me that's the optimism on which our schools and this nation have been established. If we retain that larger vision, I am confident that the future of our nation, and the future of our globe, will be secure.



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Panel of Reactors

Moderator: Vic Miller, General Manager, KTVQ TV, Billings

Panelists: Bob Brown, Montana State Senator, Whitefish

E.K. Fretwell, Chancellor, University of North Carolina at Charlotte

Ron Nistler, Principal, Billings West High School

Joe Presley, President, Westmoreland Resources, Billings

Sam Rankin, Academic Vice President, Eastern Montana College

Miller:

Dr. Boyer, you said not too long ago in an article that you fear that the monetary responses to education may not be equal to the challenge, especially if an aging population concerns itself with cutting taxes. Could you elaborate on that?

Boyer:

Our report did not focus on financing public education. We felt that there were issues that were prior questions, and that for too long we had been concerned with finances and had not raised what seemed to us to be some educational issues of consequence. So to the extent that people wish to feel dissatisfied with our report for not confronting the fiscal agenda, we stand as charged. But I have felt for a long time that the level of support for public education was directly linked to the clarity of purpose and to the public confidence. To the extent that educators can speak with conviction about what they are trying to accomplish and then can give some reasonable evidence to the public that those goals are being achieved, I think the financing of education has a fighting chance.

As I have gone around the country during the past months, my feeling has increased that this nation believes deeply in education. It is one of the convictions that is found in all parts of the country. It is firmly rooted, not just in terms of our children, but because we do believe sound education is tied to our democracy as well as our economy. There is a deep belief that we need education in order to carry on the work of this society. It is the one means by which our search for equality of opportunity is lived out. So public schools become nearest to being what I sometimes call a civil religion. It is one of the points in which we have a shared culture that deeply bonds

us. I would hope that nothing is done to tear apart the commitments to this vision of public education for the public good. That's why I oppose fragmentation around too many divisive alternatives.

But on the dark side, and this is more of a repeat of what you quoted than an answer, I think we can't take that commitment for granted. For the first time in our history, we are an aging people. Only 30-some percent of American households have children of school age. That percentage is going down, so we can no longer assume that a household will have an immediate interest because "my children need to be served." When it is grandchildren or great grandchildren, that interest may be somewhat more oblique, although one hopes not. Also, as Governor Schwinden said in his remarks, there are competing priorities that come with the shifting age in the population. For example, older people understandably care about Social Security, health-care issues, and other matters. This doesn't mean they are mean or evil, it is just that they do have concerns that compete.

When our children were in school, whenever it was — twenty or thirty years ago — it seemed as though everybody on our block had children in school. When we would get together, we would talk about the school. That was the neighborhood preoccupation. At many of the distinguished schools that we visited in our study, we noted that the neighborhood has changed and now it is essentially an older, graying neighborhood. And schooling is not the centerpiece of the priorities.

I do think we need to note that while we are an aging population, at the same time we do have minorities, Blacks and Hispanics who have a growing youth population. Sixty-six percent of all Hispanic households have children of school age, for example, which is more than twice the white majority. It is true that it is clustered in certain parts of the country, but I do remind you that America has to understand that we have to educate all our children, including minorities who increasingly make up the future of the nation just by virtue of the youth bulge. If we were to look at the negative signs, we might say that we are growing older and also that there might be more prejudice and resistance to educating children from cultures that seem somehow strange in their languages and their backgrounds. But if we don't work toward inclusiveness through the public schools, then I think we are really challenging the nation's future.

I believe that in this current debate, it is important that we as educators are able to speak common sense, clarify goals, and give some reasonable evidence that our goals are being met. I believe this is a generous nation, believing deeply in education. While there might be short-term setbacks and confrontations over some priorities, I don't think the nation will allow its schools to decline if it has a sense of where they are going and has some confidence that those goals are being achieved. I don't think Americans are wholly unreasonable. They don't expect miracles. They just expect sufficient evidence that we are working hard and some gains are being made.

Brown:

I think that if the public has confidence in the school system, they are liable to support the school system, and certainly that is good.

But they have to have some feeling that the system of financing is fair. If they think it isn't, in spite of the fact that they may think good things are happening in the school system or that perhaps the school system is improving, if they think they have to pay more for education in their school district than some other school district has to pay in some other part of the state, that is going to cause some resistance and resentment. We have already seen some of that in the state of Montana. There are differences that are major between the eastern and western parts of the state, and that is reflected in the way we finance our schools also. Both sides think they are being gypped by the other. I think that has been a contributing factor to the fact that we have had so many problems getting our mill levies passed.

Boyer:

This is a powerfully perceptive point and should be repeated. There has to be a sense of fairness in financing. People can believe in education, but if they feel that there is inequity and that they are carrying an unusually disproportionate load, then people do become dissatisfied. We really have a Rube Goldberg arrangement of school structure and school finance: We have had local control and we want national results, a curious ambivalence in this nation. The truth is that for the first time nationwide, we have a state rather than a local system of public education — 51 percent of all the monies that go to public education come from the state. That varies from state to state, but that is the national average. That's a remarkable shift, and the percentage of state funding is going up. One can argue that that has the disadvantage of taking some of the local interest away. If, however, state financing leads to more equitable distribution, as some have argued and even as some court cases have insisted, you could move to greater financing equity that might overcome what looks to be disproportionate financing in districts.

I simply reinforce the point that was made. There has to be a sense of fairness. Moving toward a state system I view with ambivalence. More state control may result in less personal involvement but perhaps in greater financial equity.

For the record, I do wish to make the point that I don't think the answer lies in federal financing of public education. While I do think there are several important federal programs that should be supported because they achieve equity and respond to national emergencies, I don't believe that the funding base for public education in this country can or should be a federal responsibility. Right now public education receives about 8 percent of its financing from the federal government. Financing a few programs that we suggest in our report, which of course, were divinely revealed, might lead to 10 percent or so, but I can't see the federal role of financing going much beyond that in the future.

Fretwell:

If teachers themselves got started right — and I am thinking about new teachers — conceivably a lot of exciting things would happen.

I get the impression in some cases that new teachers — in many cases having been well-prepared by colleges and universities — are suddenly thrust out into the real world, which is a little different even from a good student-teaching experience. Suddenly they are thrust up against tired and perhaps partially burned-out teachers. What can be done to keep the idealism of the new teacher alive in the real world?

Boyer:

I have no answer to that. I do think that we should work at attracting young people into teaching more seriously than we do. I've been intrigued that our future teachers are now in high school. I'll never forget a teacher in high school who asked me one day if I would help him teach the class. Probably a careless act on his part, but he forever planted in my mind that maybe I should be a teacher. I think we should work as aggressively as we can at attracting outstanding students in high school and planting in their heads the idea of becoming a teacher as assertively as we are searching for young scientists and young math people and the like.

In fact, I think universities might have summer institutes for future teachers, gifted high school students who might spend two or three weeks talking with good teachers about the excitement of teaching. But I also think there should be a federal program in which scholarships are given to outstanding college students to pay their tuition, with the understanding that they teach several years in a public school. We did that with great success when we had a shortage of doctors, with the agreement that they would work several years in a national health clinic. Why not attract some outstanding teachers? It seems to me there might be a modest national response if the nation is at risk. And one of the responses might be national scholarships for outstanding college students.

I think that in the future, in some fields at least, like math and science, we may have to agree to a professional pattern where people teach for several years and then enter other professions or come back from another profession for several years. I'd rather have an outstanding teacher for several years than a third-rate one for thirty. I think the idea of short-term service is not inappropriate, at least in some fields.

I believe that in every school there are outstanding teachers who could be mentors for young students, for beginning students. In fact, that's the best way, I think, for students to learn how to teach. To work with outstanding teachers. In our chapter on the status of the profession, we talk about identifying outstanding teachers and not only giving them rewards and recognition, but also, as one of their professional roles, having them assigned as mentors to young teachers.

We don't permit doctors to begin practicing medicine until they have worked with mentors in internships and residencies. It seems to me we are much more casual about a much more awesome task — moving into a classroom with thirty children without the careful mentoring and guidance of the best and most-skilled teachers. Unless we build that cycle of renewal, we are going to have young people come in and

feel frustrated and maybe pick up negative signals and then leave. So I do think that mentoring is an inherent part of the continuity of the profession.

Fretwell:

It's important that there is an understanding on the part of the new teacher that once in awhile, if he or she is really trying hard, it's all right to make a mistake. I remember starting work as a teacher in elementary school and the principal said, "You are going to have some hard times, and we think you can make it. By the way, this is where I keep my aspirin."

I think a reason that teachers do not assign writing is that some universities themselves do not do the best possible job of teaching undergraduates, some of whom are going to be teachers, how to write. So I put in a pitch here for the Writing Project, which is focused on the success of really good teachers in the schools, not just in the universities, who help other teachers learn how to write, who help kids learn how to write.

Nistler:

I have a question relating to staff morale. My experiences this past year in reacting to and interacting with teachers showed that, as a result of reviewing all the wonderful recently issued reports, they found their morale going down because they felt that they were being pointed to as part of the problem or as the problem. How do we get teachers to view themselves as part of the solution and not part of the problem?

Boyer:

I share with you the sense of frustration that many administrators and teachers have expressed about the negative focus of the debate, and I frankly feel that on balance the debate has been distorted and unfair. Education is a human enterprise, and there is no such thing as school renewal, only people renewal. We are inclined to look at organization and structure rather than at the most essential point, namely, the quality of life and the people, which to me is the only intervention that will matter. If after debate, the people who go into schools and classrooms every day feel diminished rather than uplifted, feel insecure rather than confident, feel condemned rather than appreciated, we are going to end up in worse shape than when we began. We will have created the illusion of "tightening standards." Meanwhile, we have suffocated people.

My own view is that there is no such thing as an organization. It's only an image we carry in our heads, but we don't understand that very well. When I became Chancellor of the State University of New York — sixty-four campuses across the state — some of my friends said, "There is no such organization. It's a series of independent fiefdoms, with nothing connecting them together." At first I thought they were right. Then it occurred to me that no, the State University of New York is an idea. That's all any organization is. It's an idea. Eastern Montana College is an idea. It's not concrete and stucco and all that. People share some image in their heads about what this place

is. Then the question is, what is the idea they carry in their heads? Is it a good place, a bad place, is it succeeding, is it failing? That's all this thing we call institutions eventually is. What I am concerned about is this: Can we help teachers and principals and superintendents feel somewhat more confident, more secure, better informed, more excited? What happens in the state capitol doesn't matter if it doesn't end up creating some changes in the quality of life for the people and their thoughts about themselves. That's why I think we have to focus more on people than on structure.

At the local level, in every job I've ever had, I always proceeded on the assumption that the people there would rather win than lose, rather succeed than fail, rather be honored than criticized. If we can somehow create in the minds of the public the notion that basically this is an institution that is doing a good job with some problems, then we are on the right road. But if we are assuming that there is more bad than good, more evil than righteousness, more incompetence than competence, then the institution, it seems to me, will never make its way to renewal.

Presley:

Working in private enterprise, in a profit-making environment, I am very concerned about productivity. Would you comment on the length of the school day and the school year?

Boyer:

You could argue that we are not very efficient or productive. On the average, we have 180 school days per year, and compared to other industrialized nations, we are far behind. If I were to start over, I would not end up with the schedule we have now. I'd like to see a year-long school year in which there were shorter terms, perhaps three terms in the year with some break in the middle that would allow students a bit of relief and teachers some time for recovery and to work on the jobs they have to do.

I really think that we should consider the total calendar, and not just the agrarian model, which really did set the tradition we have now. My grandfather was born in 1872 and died in 1972. I asked him one day, "Grandpa, did you ever go to school?" He said. "I would go for about three or four months when I didn't have to help with the crops, and I learned to read." He thought he'd had the equivalent of about three years of schooling. His whole answer was built around the obligations at home. And that is what set the current calendar, built principally around the demands of agrarian society. That's not as relevant as it used to be.

If I had my way, I'd work out three terms with time off in between. The only problem is that the American people don't seem to want to reorganize the school year. It has not been accepted, at least yet, by our society. I have a feeling, though, that we are moving in the direction of reorganizing the calendar because more parents are working year-round, and in single-parent families or families where both parents are working, the summer term is becoming a socially — parentally — difficult period for families who frankly need babysitting as much as they need education.

I know in Washington, D.C., when we had a snow day, half of my employees at the Office of Education would call in. I am overstating the case to make a point, but the truth is that the schools are performing an important custodial role as family patterns are changing and as the demands of an agrarian society have shifted. I would guess that in several decades there will be a shift in both the length of the school day and the calendar.

A final illustration. I am intrigued that in New York City it has been seriously proposed that kindergarten continue until 5 p.m. Not for educational reasons, but because parents need their children to be cared for until 5. The school's custodial role because of parents working is beginning to be felt.

To answer your point directly, there is no question that more time well-used could lead to more education. Our school day is probably too short, and our school year too short as well. I have grandchildren in Japan's schools, and even in the early grades the children have formal schooling until about 2 p.m., and then every day of the week they have a series of elective clubs, electives in arts and other areas that children can work with until 5 p.m. So the school day, even in the elementary school, runs fairly long, but the children change pace. They will have formal classes from 9 to maybe 2, and then they will have their so-called elective clubs. There is, in a sense, an extended school day. We can't have that kind of school day until the American people become supportive, and I think the trend is in that direction for perhaps the wrong reasons.

Nistler:

What troubles me a great deal is the idea that there is something magic about the fifty-minute period and the four years to get through high school. Do you see any change in that direction?

Boyer:

It seems to me that what's important is not so much changing the length of the school day, but better use of the time we already have. I am as bewildered as you are with the fifty-minute period, which is really in some ways tyrannous, especially in some subjects. In our report, we cite three examples where a larger block of time would be much more effective pedagogically. In writing seminars, for example, more time would mean that the teacher could critique the students' writing on the spot and the students could try again. That's an example of student performance and feedback and discussion that I think would increase learning terrifically. Or foreign language study where conversation seminars might call for more than a fifty-minute spurt, which I think is the worst possible way to learn a foreign language. Or certainly science laboratories or certain of your vocational laboratories, where several hours in a day would be much better.

I remember as a freshman in high school I took a course in printing. Those were the old days when you put lead letters into a little holder and then ran a printout. For the whole semester, about the time I had finished mine, the teacher would say, "Time to put it all back,"

because you had to not only assemble it but put it back before the fifty-minute period was over. I got a D in printing. I am very hostile about this. To this day I believe I'd be a better printer except for the fifty minutes. I was just slow.

On your second point, four years of high school, I do wish we had a lot more flexibility, especially in the junior and senior years, for students who are ready for college work and also might spend some time in communities of learning outside the school. I think, especially in the last two years of school, we could have more flexible scheduling for young adults. But by and large we still treat high school students in the same paternalistic way as we did the first day they walked into the school as sixth graders — they're self-contained, attend fifty-minute classes, and are in school until three o'clock — and then boom, they're out in the world. The day they graduate, suddenly they are expected to perform with some degree of independence. I'd like to see flexibility in scheduling, both within the time we have and also in the length of the high school program. The main argument against it seems again to be the custodial role that the schools play. If we let students out away from school, people worry about who's in charge. Second, there are the logistics of numbers. It's easier to manage around a rigid schedule than a flexible one. Everything argues against that kind of rigidity because of the differences among our students, but we haven't found a neat way to be flexible.

Rankin:

One idea that has intrigued me, since it was first brought forth in your report, is the concept of a service unit. Do you know of any districts or think tanks that are involved at this point in time in further implementing that concept?

Boyer:

As you know, the private, nonpublic schools have had a longer tradition of this than the public schools. Many of the Jesuit and Quaker high schools have had service as a requirement for a very long time. Some public schools are including service in their programs, too. The most exciting one we found was in Metro High School in St. Louis, where for ten years a principal with power and excitement has built service into the tradition of the school. Detroit has had a program of service or work experience, I believe, for the entire city system, that has been received with mixed emotions.

In the California state legislature, two committees in the House and the Senate, with whom I met about a month ago, unanimously passed a joint resolution. Under it, the legislature has developed a piece of legislation that has passed in the House and that I understand will go through the Senate, in which the state of California will provide support to school districts throughout the state that wish to implement service. The chairman of the Senate committee is convinced it has opportunities statewide. As a footnote, there have been, of course, varieties of reports over the years dealing with service as a concept, not just in high school, but universal service or alternate service for young people. There are pros and cons. I understand that.

I think the issue is alive, and I think it is touching a concern that is widely shared. Whether service takes on the form that we suggest is not as important as whether we can discuss how best to think more carefully about our students and their own sense of worth. I would add that I think that any service program that is introduced should be made a part of the educational experience, not tacked on. Part of the great gain might be the seminars that students would have based upon their service, and perhaps the writing they would do about it, so they would learn from it and not simply say, "Well, I've gotten my three brownie points." It seems to me the service performed should be examined, both the agony and the ecstasy. Some of the experiences might be painful and downright awful. But examining why you found it painful, why it didn't work, may be as important as rejoicing in the experiences that you have. I wonder whether even some colleges might begin to reflect on the issue of whether students might be stimulated to think of ways they could serve. I believe the issue worthy of exploration, and I see some signs that it is getting serious attention.

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Selected Questions from the Audience

Moderator: K. Schipper, KEMC Radio, Eastern Montana College

Question:

Dr. Boyer, it was mentioned that in your book you described a five-year teacher training program. Please describe that program. What is its emphasis on a liberal arts background, and what is its emphasis on teacher methods courses?

Boyer:

The elements of teacher education include a core curriculum that I would hope matches the core curriculum for the schools. You can't teach children that which you do not know. I think, frankly, the liberal arts college has failed miserably in thinking carefully about its own core of education; and I think schools of education have been maligned in carrying the full brunt of criticism in teacher preparation when, in fact, most undergraduate colleges have in the past several decades been very unclear about what they think are the core courses for a general education for a bachelor's degree.

I'd start with a strong general education program for all students. Clearly, one needs to have additional training in the field of special competence, depending on the field one is to teach in. I must say I am a little less clear about the elementary school teacher, who still is expected to know all and teach all. That is an unusually awesome responsibility. But certainly for secondary school I would expect the teacher to have added training in the subject to be taught.

I believe that there are several professional courses that all teachers should also have to be a teacher. I don't think that being informed means that you can just walk into the classroom and be skillfully successful with students. So we talk about knowing something about the processes of pedagogy. I do say, given our emphasis on language, that every teacher, regardless of the course level, should have a course in the teaching of language, with special emphasis on writing. I do think that the best preparation for the classroom teacher is to work in the classroom with a mentor. So I believe in a fifth-year teacher preparation program that would be devoted after the baccalaureate heavily to classroom activity by the prospective teacher, working with a mentor. So our book proposes a five-year teacher preparation program with the baccalaureate devoted to a good general education and specialization in the major, and a fifth-year program for the professional development of the teacher.

Two caveats. I feel that prospective teachers should be carefully screened and selected and chosen as teachers and not have it happen

automatically, simply by choosing education as a major. Second, I believe that certification should be separated from graduation. There should be a statewide certification panel to admit teachers to the profession of teaching after they have had their fifth year. Certification should not happen automatically on the completion of a college degree. I believe the panel that certifies teachers, that admits them to the profession, should be made up, at least in part, if not principally, of teachers, so that we do have a model of teacher certification that is controlled by the profession.

Question:

Dr. Boyer, you mentioned the fact that year-round school might be the solution to one of the problems in education. We in rural communities would have a problem with recertification and updating our credentials since we are away from major college centers. How could there be something set up to deal with that kind of problem for rural communities if year-round school were indeed a reality?

Boyer:

What I didn't mention earlier is that in a year-round calendar I would build in teacher terms along with student terms. I believe that we are going to have to acknowledge the fact that teachers must continuously be renewed, just as any other professional needs to keep up in his field. There are radical changes going on in professions, and to expect teachers to teach for thirty years and not be continuously renewed as an essential part of the profession is to me a major oversight.

If I were dreaming about this year-round calendar, I would build in teacher terms as a part of the year so that there would be periods of time in which teachers would be formally permitted to continue their own professional development as a part of the year. These terms might not be full summer terms. They might be several weeks interspersed. That would introduce the logistics of how you would have access to outside professionals who might help. But I have a lot of faith in teachers designing their own terms of renewal. Some of the teachers of teachers might be from within the school itself or from other schools or universities, and could present short-term lectures and/or serve as seminar leaders.

Question:

That would mean that the universities would have to make some changes to comply with the needs of the teachers.

Boyer:

Absolutely. The truth is that education is the only profession in which teachers and practitioners are viewed as low people on the totem pole, and they have to adjust to the hierarchy of the lecturers and researchers. In my judgment, it should be the other way around. Schools should rejoice in the work of the teachers, just as when medical schools graduate their doctors, they stay in touch with them as professionals and colleagues. There is no hierarchy; there is a kind of interrelationship among researchers, theorists, teachers, and practitioners, and they learn from each other.

Can we in education dream of the day when educators see each other as colleagues performing different functions? I believe it is the task of the schools of education and universities to provide resources on teachers' terms, not the other way around. But how many teachers have driven 150 miles to hear some dreary assistant professor drone on about his master's thesis, and to do it in the name of continuing education? That's an insult. We are only going to make this a profession when we start recognizing that the teachers should have considerably more say in determining what the continuing education content should be, and the place and the time that it should be held.

Technology might make it possible for us to get video and audio cassettes that would be developed around topics, themes, and issues that would allow teachers, at different places and times, to stay in touch more flexibly.

Those are the kinds of imaginative decisions that I think teachers and college professors should start thinking about together.

Question:

Would consolidation in the rural areas help to achieve excellence in the schools? For example, would consolidation help keep salaries competitive enough to draw and keep quality teachers, and to provide resources and materials for quality programs?

Boyer:

I am absolutely torn on the big school-small school issue. James Conant's report identified the importance of consolidation, arguing that you do gain the critical mass that allows you fiscally and perhaps in teacher personnel to have resources that small schools can't provide. As you all know, that was followed by a study called "Big School-Small School," in which it was pointed out that you also lose certain social and personal development as schools become larger. Where is the magic line between bigness and smallness? The truth is that American high schools are small schools, by and large. Over 50 percent of American high schools have 500 students or less, and I imagine that the districts you are talking about would be considerably smaller than that. I don't think you run into problems of bigness in the social sense until you get to somewhere between perhaps 800 to 1,200 students.

Incidentally, we build our schools in strange ways, with boxes, so it is hard to create a sense of community just because of the way we organize the schools. But I guess I'd have to say that there is some advantage in consolidation in terms of the resources you can bring to bear. Some of the trade-offs are whether students feel less and less involved, and the basic logistics of transporting children many many miles. It seems to me that each region would have to work out what it thinks is the best balance between the resources needed, the sense of intimacy and closeness, and the logistics of distance, and there is no magic there.

Dr. Vito Perrone, during the writing of our report, told of some of the experiments in North Dakota in which classrooms are actually being taken to schools instead of the other way around. I haven't seen his mobile classrooms, but I understand that mobile units with

travelling teachers and a laboratory or maybe some vocational equipment and the like are being taken to some of the more remote schools for a month or two. It may be that in some states where we have great distances, we might think more creatively about not only bringing audiovisual aids into use, but also actually moving classrooms and teachers around instead of always moving students. I don't think we have been as creative on that score as we might be, and there may be itinerant teachers who would, in fact, enjoy moving from region to region. If we are really creative, we might have smallness that could be enriched in ways by bringing the mountain to Mohammed. Yet we almost always think we have to transport children. Maybe we can transport ideas, audiovisuals, and even professors or teachers and laboratories to some extent. We haven't been very creative there.

Fretwell:

In North Carolina, we have fifty-eight public two-year colleges and technical institutes, which some people think is too many for a state with 100 counties. But there are cases where, when a high school can't do something, the community college will provide a course, courses, or experiences if the student is of a particular age, such as over eighteen, even though the student is not a high school graduate. Whether this would work in another context, I don't know, but it works quite well for us, particularly in regard to people who fail to graduate for one reason or another and don't want to go back and be with "kids." They go to the community college and eventually become high school graduates.

Boyer:

In New York, Syracuse University has for ten years run what they call a University in the Schools Program, in which they identify a gifted high school teacher, give that teacher university recognition, have him on campus for the summer, and then have him teach a college-level course in English, math, sociology, or another subject in the high school. Maybe three of the courses he teaches would be for high school credit, and one or two would be for college credit. Since the teacher is certified by the university, students can get university credit for their university-level courses, and the credit is fully transferable, not only to Syracuse, but to any other college. It has been found that when the students who take those courses in high school go on to college, they do as well as or better than the students who wait until they go off to the high and holy mountain called a university to take the courses.

One of the points of connection might be to actually have some of the high school teachers teaching beginning college-level courses for students who are able and are ready to move on, and to start interrelating this program more effectively than we do. That sort of program makes the high school faculty member a colleague with university faculty and breaks down this business that you are one or the other, which is so pernicious. I think the university gives the title of something like an assistant adjunct lecturer. The university

goes all out to provide status. This arrangement creates some collaboration and collegiality between the school professional and the university professional that I think is healthy.

Question:

What do you feel can be done in the present school system to help teachers teach critical thinking?

Boyer:

The only way to know what's in students' heads is to have them express themselves in writing or in speaking, and then to critique the expressions that they have made in ways that you think represent clarity of thought and reasonableness of conclusion. Now, that's a value judgment, but critical thinking is by definition value-laden. Presumably, as you are able to assess their work with care, then students learn from that critique and perhaps become more careful in the future. I guess that's the only way I know. Some argue that the computer can very often offer a very disciplined process that is vigorously demanding. A computer can teach you by saying "Wrong, try again," and "Wrong, try again," until there is an order and arrangement in the ideas being expressed. I would imagine that in the future there will be programs that will be excruciatingly precise, and at least a computer is not ambiguous. Whether it's relevant is another matter, but it's demanding, and there are those who claim that that will be a means by which critical thinking can be developed as one comes to terms with the precisely arranged program. I'd be delighted to hear others comment on this question.

Nistler:

The comments that Dr. Boyer has made certainly are relevant in terms of teaching the critical thinking process. My personal feeling, however, is that we need to do a lot of work with teachers in terms of questioning strategies. Many of the kinds of questions that are asked in the classroom are first-level learning processes, and that is where they stay. We'll never move to the critical thinking area unless we get into application and synthesis. I think we need to do a lot of work in the training of teachers in terms of questioning strategies as well as some in-service with the present staff.

Boyer:

Mortimer Adler, as you know, talks with great vigor about the Socratic method. He tries to point out that the quality of the question is really the crucial answer. You can have a lot of oral expression, but it's only when you sharply hone the quality of your question that you can lead to what was called the higher order.

Rankin:

I think at the college level we need to take a look at the training of teachers. We need to take a look at the elements of synthesis and analysis which are basic to critical thinking, and at how we encourage critical thinking on the part of all students in, for example, a general education program, whether we are teaching literature, the arts, history, or science. The emphasis should not be just on the discipline,

but also on the skills that emerge as a part of the discipline. We need, perhaps, to define those skills. What is synthesis, what is analysis, what is critical thinking? At the higher education level, I think we have assumed that that takes place, and I think we need to take a look and assure that it is.

Question:

What can educators do to encourage parents and the community to get involved and support academic excellence rather than the more visible athletic activities?

Boyer:

I do think it is a comment on priorities that parents are more excited about Friday night football than about about Monday morning academic performance, and we should be honest about that. I've seen districts that are more concerned about the football coach than the first grade teacher and where, somehow, we live out through the gladiators on the field some macho confrontations.

I think athletics have a place, and in our report we talk about the importance of health. I think we all should understand the care of our bodies, especially through nutrition and preventive medicine, and that seems to me a neglected field. I think the nation is getting more understanding of that. But the athletic programs in most schools do not, it seems to me, serve well the health education interests that I have just described.

I think school administrators and school boards should think of ways to give special recognition and celebrations to academic performance in the school that might parallel some of the athletic honors and citations. I've seen schools that have all-school assemblies celebrating the school winners in the athletic program. But we don't celebrate as openly and with as much enthusiasm those who achieve educationally as well. Maybe some parent committees could be organized by the school principal and a few teachers to talk about the issue of how to celebrate occasionally — as a community affair — the outstanding academic performance in their school.

I think the ceremonies and the celebrations and the symbols that we do **not** give to education are significant in their absence. I'd work hard at trying to find those symbols of academic achievement and excellence among the student body at graduation time, but even during the school year, so that the students and the parents get the idea that the priority here is educational achievement, and we are going to pause and celebrate those accomplishments and not just let all the cheers and celebration occur surrounding performance in the athletic department.

Brown:

There is an old saying that there is more interest in a dog fight than there is in a dog show. I am afraid that trying to get people interested in academic things would make pretty dull coverage on the sports page of a newspaper. Athletic tournaments are exciting and they bring people out. As Dr. Boyer pointed out, athletics have a young gladiator aspect, where different small towns conquer each

other figuratively. A lot of local pride is at stake in these contests. By their nature, athletics are so competitive that they tend to shoulder other things aside, especially in smaller high schools. As a classroom teacher, I frequently look around my room and I see six, seven, eight kids gone, sometimes in the middle of the week, to a cheerleaders' clinic or to a junior varsity scrimmage. They are gone often enough that their absences become pretty intrusive. I think this is a developing problem in our educational system. We talk about extending the school day and extending the school year. I think we also ought to pay some attention to what we do while the kids are in school.

Boyer:

There is a program in Washington, D.C., in which schools come together in an academic competition. The students are asked hard questions and the schools have winners and losers. I'm still fond of the spelling bee. It's something to figure out how to compete. How to have academic dog fights.

Question:

To what degree can humanistic goals be measured for purposes of accountability?

Boyer:

It is very difficult to measure in education the outcomes that truly matter. In the absence of that, we tend to measure the less consequential. The outcomes that truly matter are those that involve critical thinking, that is, taking information, reaching discriminating judgments, and then applying that information wisely and in a value-laden context. That, to me, is what education is all about, and those are precisely the conditions we do not measure and that don't show up on national exams or the SAT's. I don't diminish the idea of acquiring information, I only say it is information that's wisely used that marks the educated person. I can only say that we should spend more time watching not only the expressions of our students, but also the quality of their use of information, which means relying on the judgments of a discerning teacher.

This question hits at the nub at the dilemma of education — how to assess carefully the components that are genuinely most important. We have given little thought to that, and I worry that in our push toward evaluation, we will end up measuring the wrong outcomes, and therefore teaching to the wrong ends.

Question:

Many studies and reports identify global and international education as imperative aspects of the educational process. However, provincialism is most apparent. How can campuses and school districts improve this situation?

Boyer:

I do worry that our educational focus will be more parochial. We are a very big country, and I think colleges and schools have an obligation to work very hard to develop an international perspective

because we are so powerfully important in world events. If we miscalculate, the human race miscalculates. Education can't do it all, but I think our schools have to press the understandings of our children beyond our communities and beyond our national boundaries because that's where our future lies as well. We are an interconnected community around the world, and our children have to somehow understand that. I think our attitude toward Latin America, for example, is frighteningly narrow and provincial. Yet our destinies are interlocked. We suggest in our report that every child should become familiar with a nonwestern culture, perhaps studying it in depth, learning about its people and traditions. I know the debate about foreign languages, but I do think that the continued decline in foreign languages is really a symptom again of a casualness and disinterest in even the languages and cultures of other people.

One illustration: I read the other week that in April 1980 there was a day called National Heritage Day. An international commission on historic sites and monuments had identified 165 monuments and sites around the world that were considered to be human treasures that represent human construction at its best and human tradition at its best. It occurred to me that the study of those sites would be a marvelous core curriculum for our children. Why don't we have our children study those sites and monuments and also the culture and traditions that fostered them and begin to see the human story? Learning could be built not around politics and war, but around those creative activities of the human spirit that have enriched and sustained us. That would be, in my judgment, a beginning to gaining a vision that breaks out of national boundaries and narrow interests and begins to see what I consider to be the story of the human community that gives us world perspective.

Question:

In the past three years there have been about five national task forces that have been asked to look into the question of what's wrong with the public schools and make recommendations on how to improve things. All of those task forces have recommended more homework. In comparison with the schools in other highly industrialized countries, we seem to be assigning less work at home. We would be interested in the reactions of the panelists to the pros and cons of the homework question.

Brown:

I think more homework is appropriate if the teachers have an opportunity to analyze it carefully, read it carefully, and make comments to the students that will help them learn from it. But if homework just becomes burdensome busywork, if it is piled on just for the public relations purpose of making the community believe that a lot of work is going on in the school, and if the teachers don't have an opportunity to carefully go over the papers, then it becomes drudgery. It turns kids off toward school, and it burns teachers out.

Rankin:

I also think it is the nature of the homework that is important. I

think parents can afford to be discriminating on occasion, and if the homework appears to be busywork, perhaps they should look into it. We are consumers at that level. Believe me, at the college level students are certainly asking questions when the homework does not appear to be productive in nature, does not appear to be enhancing what they think to be advancing their skills to become, in Roskovsky's terminology, fit company for educated people — skills in critical thinking, language, and other areas. Perhaps we could, as parents, in a positive way, encourage a myriad of activities, competing activities. Many of those could be learning experiences with some assistance from the parent. I think we can, even in some of the competing activities, find learning experiences of a very critical nature at critical ages.

Question:

Can you foresee any movement from the legislative branch to recommend a change in lengthening the school year and having the funding as well as the school activity coordination become statewide?

Brown:

I can foresee it. As you know, the legislature in Montana only meets every other year. The only thing pertaining to the length of the school day or the length of the school year that came up in the 1983 session was a piece of legislation to give school districts the option of having school for four days a week, but for longer days. The bill passed the House of Representatives and then died in the Senate. The arguments against it were primarily based on tradition — on the fact that we've always had a five-day school week.

But you know, we didn't realize how at risk the nation was during the last legislative session. Those reports weren't as well known then. So my guess is there may be quite a bit of legislation in the upcoming 1985 session on these kinds of concessions.

Question:

A senior writing project as part of the curriculum was mentioned earlier. We would like to hear more about the objectives of this kind of writing project for seniors.

Boyer:

Those objectives relate to the discussion about critical thinking. I think that students should demonstrate, first, that they are well-informed; second, that they can take information from across the disciplines; and third, that they can apply it to an issue that will affect their lives. To me this is what the formal years of schooling are all about. They are not just about recalling facts in isolation through multiple-choice or true-false tests. Can you express your knowledge with clarity, can you draw information from across several fields and not just one, and can you use it? The only way I know to assess that is to have a student write and demonstrate the skill or lack thereof. The absence of testing that skill means, in my judgment, that we're giving a diploma without having clear evidence that the central purposes of education have been achieved. Having students take

separate courses and pass them in isolation does not give me any confidence that that capacity exists.

Question:

The *A Nation at Risk* report recommends that a half credit of computers be required for students to graduate. Would Dr. Boyer agree with that requirement?

Boyer:

No. I am not at all happy with the term "computer literacy." I don't know what it means. That wouldn't bother me, but when I ask others, they don't know what it means. That bothers me. I discover it's a term like silly putty. It can be shaped into anything you want. I think we are in a craze period right now that has always marked the technology revolutions of the past. Buy now, think later. Somehow it's become voguish to have a piece of hardware in the school, but very little thought is being given to who is to use it and to what end. The current move seems to be to encourage students to learn a program, to work at programming the piece of hardware, and to learn how the equipment works, which, in my judgment, is a little like having students adjust carburetors rather than learn to drive cars.

I think that all of us will be affected by technology profoundly. We are in a revolution that I think is as significant as the industrial revolution was a hundred years ago. But rather than assume that our students need to spend some time in front of a piece of hardware, we should in general education help them understand the technology revolution and how it's beginning to shape our lives. The technology question is not a technique question, it's an understanding of a social revolution that is absolutely profound. Instead of waiting 100 years to look back on the technology revolution as a historical event, why don't we study what's happening right now and how it will shape our future?

I think the purpose of schooling is to look at the intellectual, educational, and social questions of technology, and to let learning the hardware come for those who are going to be working on a job where they need to become familiar with a particular piece of equipment. If schooling doesn't put the technology revolution into perspective, I don't know how students will understand what is occurring in our culture. So rather than a computer literacy course, I'd like to have, as we recommend in our report, a seminar on the technology revolution and how it is shaping the nature of our lives, for better or for worse.

Question:

Dr. Boyer, you have suggested some changes that you believe would benefit our profession. In your travels and experiences, have you found any evidence as to how we can bring together and unify the diverse groups in education to bring about these changes?

Boyer:

I think there is a great mood now in the nation to reaffirm schools. But I am a bit discouraged by the fragmentation that still exists among teacher groups, among administrators, and among teacher

training groups. They are not talking much to each other. I have a dream that perhaps out of this growing commitment and increased national discussion, we might once again find some forums in which we can come together across our separate lines and begin to focus on the central questions of teacher excellence, the goals, the content, and the outcome of the school, and even evaluation, which frankly has been overlooked in most reports.

These are the essential agenda issues, and I think rather than talk to ourselves in fragmented groups, we might think of creating some national forums, organized by educators, not by politicians. The curious thing today is that most of the leaders who are seen publicly talking about education are the politicians, the President, governors, or corporate leaders. But the educators themselves have not been talking seriously to each other and across lines. To put it as simply as I can, we in education don't have the equivalent of the American Medical Association. We don't have an American Education Association that will allow practitioners and researchers and theorists to come together to explore what might be the themes that cut across the various lines. We are very fragmented and downright competitive. My vision would be that such a forum would be a very healthy outcome of the current debate, and if something like that doesn't occur, I'm afraid the current movement will probably settle in around the special interest groups. I think a national forum, held periodically, could address the right issues, create a wholesome interrelationship, and maybe keep educational issues in the public attention too.

Question:

We were concerned that some of the rhetoric that we have heard the past year or so on educational excellence and reforms may well fall by the wayside as many other reports have done in the past. Are you personally, or is your organization, doing anything specifically to try to bring about forums or to gather the groups together to get the forces necessary to bring about these changes?

Boyer:

We have tried to provide continuity following our report, first by my own agenda, but also by the school grants that we have given. We have given 200 school grants in the past year, and next year we're announcing phase two, in which we will give school grants to schools from coast to coast, partly to focus on the local school and to say that in the end we are going to have excellence when we start investing in the school leadership and in the teachers at the local schools.

I have had informal conversations with colleagues in national professional groups about the idea of organizing ourselves in a way to keep the conversation alive and also to bring it within the educational community and not have it simply pushed periodically by the politicians who might have, frankly, their own agenda and their own timetable. Whether we are going to be smart enough to sustain that, I don't know. But I do believe that this push toward renewal will not be continued unless educators who care deeply try to create the forums in which the central issues can be pursued. With

all due respect, politicians have understandably short attention spans, and I do not expect this issue to be carried forward at the national level long after the next election unless educators themselves find ways to sustain the visibility and the commitment for school renewal.

Question:

Given our aging population and the effect that is likely to have on the tax base for education, can you give us some ideas about creative new revenue sources that education might tap into?

Boyer:

I do know that some communities have organized private foundations to provide enrichment money to local school districts. I don't see that in any way as adequate for sustained school support. But very often they will provide discretionary funds for special grants for teachers, for leadership grants, or for providing extra continuing education. These can often provide the margin of excellence in schools, just as they help colleges and universities that need some extra discretionary support. But in the end, I guess we have to depend on the only sources of revenue that I know of — taxing either sales or property or corporate income. One hopes that the right balance that is fair and equitable will be found and that the priority of schooling will be sustained along with other demands.

Brown:

Everyone here, I think, knows that the financing of education in Montana on the local level is tied strictly to the property tax. If memory serves, about 60 percent of what we spend on education in Montana comes from the state, maybe a little less than that. So about 40 percent of it is dependent upon property taxes. Even though we have been proud of our Foundation Program, a model that other states have followed since we first got it in 1947, property taxes are high enough now in Montana. Current property taxes are dramatically inequitable. Local taxpayers have been voting against the levies for the last several years, and in my opinion the situation will get worse. Unless we equalize the property tax statewide, or unless we find some other major and significant source of revenue to replace the property tax, we are going to continue to have problems.

Question:

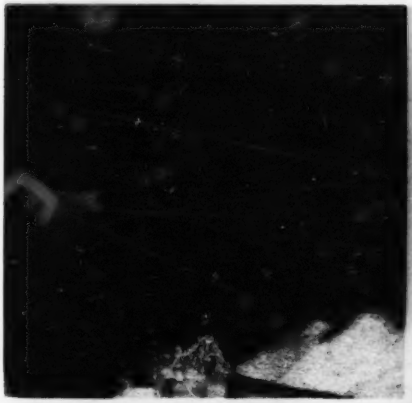
Would you give us an idea of reward or incentive systems for staff excellence that have worked well in our country?

Boyer:

The discretionary program, where at the local school level the principal working with teachers has a fund to reward teachers who have ideas is one such system. Also, I have seen a few places that have a teacher travel fund. Often teachers are locked in their classrooms for days and weeks and years and very rarely have an opportunity to meet colleagues, even those down the corridor, to say nothing of those from other schools or at national meetings. Also, we say in our report that perhaps every five years a teacher should have a special summer scholarship provided, not automatically but with

some plan, so that he could use it that summer at public expense to pursue his professional development and enrichment — a kind of inverse sabbatical every five years to encourage continuity for those who have been outstanding.

I think one of the benefits of being an outstanding teacher is encouraging young teachers and working with them as mentors. Another benefit is participating as a professional in the statewide work of credentialling and certification, being recognized as a leader, and helping establish standards. These are symbols that you are a professional, you are respected, you have status. That's the kind of movement I think we need in order to get the profession right down to the teacher in the classroom, where I think the emphasis belongs.



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Second General Session

Future Directions for American Education

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Future Directions for American Education

Presentations by Panelists

Moderator: Richard J. Wesnick, Editor, *Billings Gazette*

Panelists: William Poston, Jr., Superintendent, Billings Public Schools
Jeff Morrison, Chairman, Montana University System Board of Regents, Helena
Julie Coleman, Vice President for Investments, Dean Witter Reynolds, Inc. (former Elementary Teacher), Billings
Ricardo Garcia, Chairperson, Division of Elementary/Secondary Education, School of Education, Eastern Montana College
Mary Johnson, President, League of Women Voters of Billings
Sarah Listerud, Member, Montana State Board of Public Education, Wolf Point, Montana
Jim Longin, President, School Administrators of Montana, Helena

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Five Elements Necessary for Building Effective Schools

William Poston, Jr.

Schools today are encountering incredible pressure to respond to a lot of things, including increasing legal requirements for minimum competency and higher standards, changing graduation requirements, an unbelievable array of learning paraphernalia such as computer technology, deteriorating values, disrespect for authority, lessened responsibility, reduced commitment of students, increased time on task, academic achievement, direct instruction, and an ever-wider range of cultural, socio-economic, and ethnic differences. All that seems to comprise a new language; at least the terms and the concepts are new. In a way, though, they could be called new wine in old bottles. Obviously, the future of education depends upon the classroom teacher, who must, in the end, respond to these pressures

and changes. But it is our task as principals and administrators to provide the attitudinal and behavioral support necessary to teachers so they have the capabilities to meet those increased pressures.

Because of the widely publicized criticality of the future of our schools, we have a popular basis for school improvement initiatives. The time is ripe. My feeling is that the possible futures for education must be directed by all of us and that we must provide structured programs in our schools with five specific elements: strong administrative leadership, a safe and orderly climate, an emphasis on basic academic skills, high teacher expectations for all students, and a system for monitoring and assessing pupil performance. These five elements are the findings of studies that identify factors of effective schools.

Effective schools are well-managed institutions that coordinate instruction carefully across grade levels and classrooms. First they develop instructional goals through schoolwide planning; then they use these clear and publicly agreed-upon goals to select content, objectives, and materials; and finally they carry this coordination one step further by aligning goals, objectives, content taught, instructional materials, and the testing program. This alignment ensures that students learn what the schools intend to teach, and that the testing mirrors the instruction.

In addition, effective schools have capable leaders who support and encourage excellence. The school supports teachers and teachers' efforts to improve by providing appropriate staff development activities, discussing problems, and providing feedback, communication, and assistance. Schoolwide discipline policies back up teachers. Other policies reward effective teachers and those trying to improve. In addition, the school recognizes that improvement is a long-term process; therefore policies protect teachers who are trying new practices from competing demands on their time and from premature evaluation of their newly acquired skills. The school encourages collegiality, teaming, and cooperation among the professional staff as well as the active participation of teachers in goal-setting, instructional coordination, problem-solving, and ongoing school improvement.

The current school improvement craze, if I could use that word, pushes us to emulate effective counterparts found in various recent studies. However, simply knowing the set of variables associated with effectiveness does not mean that adopting them is the answer. The studies of and recommendations about effective schools have limitations as well as strengths. While the limitations do not invalidate the research findings, they put them into perspective and help districts resist the temptation to use them for school improvement recipes.

Everything we have talked about in this conference matters in school improvement. Everything. There are three types of people according to Lucy in an explanation to Charlie Brown. Lucy says that life is like a cruise ship. There are those who take their deck chairs to the front of the ship to see where the ship is going; there are those who take their deck chairs to the back of the ship to see where the

ship has been; and there are those like Charlie, who can't get the deck chair unfolded.

Those of us interested in meaningful school improvement should attend to all these tasks. But if I had to prioritize three in order to get our chair unfolded, they would be these: what is taught, how learning is measured, and how effectively we utilize teachers' time. Based on reports and comments, the "three R's" will no longer suffice. We must ensure that our schools are offering a curriculum that is fair to all students and that all students have equal access to instruction in the range of skills, knowledge, and abilities they will need in adult life.

This time in education is an exciting exercise in anticipation. Faulting schools has become fashionable over recent months, but now schools, in my mind, have a golden opportunity to respond to recommendations for reform, to rethink education in each of our communities, and to deliberately and thoughtfully consider recommendations for many needed changes. This is indeed a watershed in the crucial history of education and in the history of representative democratic societies.

Higher Education and the Future

Jeff Morrison

Although higher education hasn't been the direct victim of the assault of the various studies that have been done, it has an important role to play. Certainly it has its own warts that, if not exposed soon, will be exposed later. The tremendous growth in higher education has started to subside a little. I think we are going to see some changes in higher education.

We are going to see a regrouping of what we now have. We are going to see very few new programs. The emphasis will be on stabilizing and improving ongoing programs. Incoming college students will be better prepared. At the high school level, much more emphasis will be placed on preparing students who are going to college. University programs will be much more structured than in the past. They will be more result-oriented. There will be much more emphasis on communications skills, not only for students but also for professors, no matter what they teach. I think everybody agrees that to succeed in the world today, a person must possess good communications skills.

There has been a lot of talk about access to higher education in the state of Montana. I think an open admissions policy will continue in this state. I do think, however, that there will be some modifications. There will be ceilings in some high-demand areas. Fewer remedial courses will be offered, which means that if students don't have the proper background when they get to college, their chances of succeeding will be lower. Intense competition in professional areas

such as law, medicine, architecture, and engineering will continue. The sizes of schools are now starting to level off, and I think we will see a stable enrollment, at least in our state, for some period of time, with maybe some minor peaks in individual units. The number of high school seniors has started to decline, so the pool of students is not going to be as large as it used to be. Depending on what happens to the economy, I don't see any great changes in our enrollments.

There will be an emphasis on research in the university system in the next few years if Montana is to remain competitive both nationally and internationally. We must become more competitive in the research area, particularly where our natural resources are concerned. We are going to become more and more dependent on private money for this. Public money is becoming harder and harder to get.

One of the areas in which we do a very poor job is Indian education, particularly in the university system. Our success rate is miserable; very few Native Americans who start a college education finish. We must work harder in this area both for our own good and for the good of the Indian population.

Computer technologies are not going to go away. We will see continued requests for computer education for all students. Cost certainly will be a limiting factor.

Television is one of the most exciting technologies, and it probably has more potential than computers or any other high-tech educational innovations. With the advent of the satellite, television is going to be available to anybody who can put up an antenna. Educational television will become more and more important, not just in Montana, but throughout the United States. The technology is going to improve so fast in the next few years that satellite dishes that are now located in back yards will shrink in size so they can be put on rooftops. Everybody is going to have one. This means that anybody who wants an education will have it available to him, whether he wishes to go to a traditional campus or to participate in a nontraditional situation. Educational television is also going to improve and enhance the on-campus situation because students will have many more tools available to them, regardless of their discipline or their location. The possibilities are unlimited.

I think we will see more and more demands on the student loan program in the next few years. The costs of higher education are continuing to skyrocket; the demands for student loans are not going to go away. The monies available are going to become harder and harder to come by. Tuitions will continue to increase as legislatures and the people demand that the users pay their share of what they are receiving. Presently, students in Montana pay for approximately 15 percent of their education. That's a pretty good investment. I don't anticipate that to go down. The cost of education will increase, and so will tuition. I anticipate a continued erosion of public money. The skyrocketing demands from services that we haven't had in past years are going to be felt more and more to the detriment of education. As Dr. Boyer indicated this morning, the changing age of our population and the increased demands from other public agencies, prisons, Social and Rehabilitation Services agencies, and other institutions are going

to continue to put demands on an eroding tax base, and education is not going to have an easy time of it. Educators are going to have to make their case; they are going to have to continue to fight for every dollar they get.

I think that if anything has happened as a result of all the recent studies, it has been to focus the concern of the people of this country and to strengthen their commitment to education, not just to elementary and secondary, but to higher education as well. We will probably lose the best opportunity we'll have for a number of years to come if we don't take advantage of their current awareness of the quality of education.

I Left Teaching for a Rewarding Career As a Stockbroker

Julie Coleman

I am going to change the focus a little bit from what we have heard so far. Future directions, I believe, also require a look at the past, because, as we know, history has a way of repeating itself.

I left education four years ago without knowing at the time that I would enter into a very exciting and rewarding new career as a stockbroker. At the time I made the change, I was extremely distressed by some conditions that I felt would only continue to worsen. I believe some of my prophesies have been fulfilled, and I have some suggestions to make for the future.

Some of my suggestions, I think, will be a little bit difficult to implement. But, hopefully, they will impact on future trends. Dr. Poston has mentioned some of the same categories that I have targeted. Perhaps I can elaborate a little bit. First of all, the problems. They start at the top.

Too often, I feel, administrators are hired who are not capable of strong leadership. Capable administrators are essential. They may not always make popular decisions, but they need to be of strong moral fiber, they have to be able to make decisions, and if the decisions do not work out, or if the administrators do not work out, they should not merely be shifted to another school or to another position, but they should be terminated. Too much dead wood builds up in a school district because incompetents are retained. In business I have found that if one does not do his job efficiently, he is replaced. Schools are big business.

Next, teachers. Women's liberation has been a blessing and a curse to education. I forecast this some time ago. The bright women of my generation often chose education because it was one of the better jobs to which they could aspire. I will admit that even when I started to teach in the 1960s, women were not sought out for many secondary positions, particularly in my area — social studies — because coaching

was given higher priority than brain power. Of course, occasionally, if the school was lucky, it got a smart coach who was also a good teacher; but that was rare. Nowadays, bright women are going into other areas. They are going into medicine, finance, law, and engineering, many of the nontraditional fields. As far as I can tell, and from what I have heard, students from the lower portion of today's college classes are going into education, a trend that must be reversed.

Obviously, though, the tax base is not going to provide continuous salary hikes that are competitive with business. So there has to be something, a combination of monetary rewards and other recognition, that will get competent people into education. These are some of my suggestions. I would do away with tenure. Get rid of incompetent teachers. At the same time, reward the superior teachers. I know this is a problem. Evaluation is a very subjective area. I know. I worked on an evaluation team, and I helped create an evaluation plan that I thought was a very good plan. Implementing it was a disaster. At the time it was implemented, I was a department chairman in a local school. The way I'd envisioned it in the committee and the way it turned out in operation were two totally different things. We thought we had created a good plan, but by the time each administrator and each school had watered down the plan, and with the lack of leadership in many of the schools, the results were terribly unsatisfactory. Yet I know that evaluation has to go on and that it has to be done on an ongoing basis. Superiority has to be rewarded. Mediocrity must be challenged. Incompetency must be eliminated. This is the only way to make the schools change direction and go forward.

Next on my list: schools of education. I don't think it is really possible to teach someone how to be a good teacher. I think that one learns by doing. I would strengthen the academic requirements for prospective teachers, making it absolutely mandatory that a future teacher be proficient in English. I would have every future teacher pass a competency test before he or she is allowed to accept a teaching position. Lawyers take bar exams, stockbrokers take securities exams, doctors pass strict exams. Our children are our most valuable assets. Why shouldn't prospective teachers pass proficiency exams before they are allowed to handle our most valuable assets? If one cannot spell, how can one spot misspellings? If one doesn't use proper grammar, how can he or she be an example to others? I saw many people in the schools where I taught who could not have passed competency tests. I don't think they should have been teaching.

In the schools of education I would reduce the number of staff teaching education, and I would strengthen the staff teaching English, foreign languages, history, mathematics, and social sciences. Instead of having many of the classes that all of us who were in schools of education found boring and worthless, I would have internships under master teachers in actual classroom situations. I would follow medicine's lead and have an internship, a residency, and a specialization. One learns by doing, not by having somebody teach you how to make bulletin boards. In the colleges I would stop hiring so many Ph.D.'s in education, and I would find more Ph.D.'s in the

academic subjects. All along the line from college to high school to elementary school, I would start giving F's. If one doesn't succeed in the classroom, particularly in college, then be sure he doesn't get into the classroom trying to teach others. Demand excellence. Demand it from the students, demand it from the teachers, demand it from the colleges.

I have always thought that too many administrators and too many committees were a waste both in government, which is something I have studied rather extensively, and in education. Spend the money where it counts. We are spending lots of money. I don't think we are allocating it right. Spend it on the educational system for training teachers, and spend it on the master teachers. In my business, the financial area, we create our own opportunities, and we compete with others on a continuous basis. We have a great dropout rate in the brokerage field, but a survival of the fittest provides highly skilled, competent people with staying power. I would like to see the same thing happen in education. Make it competitive and rewarding. Let the master teachers have enough flexibility to be innovative and inspiring. Get rid of those who can't or won't inspire their classes.

Parents are also an important part of the team. But as a teacher, too often I saw both administrators and teachers cowed by intimidating parents. Involve parents in discipline and in the rewards of excellence. But if you know that you are right, then don't let them change your course of action. This is, I think, critical to the success of new ideas. I think education has to be upgraded. It has to be our nation's number-one concern, because to do nothing is to spell disaster for the nation.

Will We as Educators Make a Difference?

Ricardo Garcia

I want to tell you a story. Twenty years ago, in June 1964, there was a guy down in a little college in New Mexico who had a teaching certificate in hand and the almost outlandish idea that he was going to save the world from illiteracy. That was Ricardo Garcia, a college graduate, certified in both English and social studies. I was going to go out into the world like Don Quixote and take on windmills, the windmills of ignorance, prejudice, and illiteracy.

I went down to the largest school district in the state of New Mexico and put in my application. When I was asked if I was certified to teach, I presented my certification. I was very proud of that piece of paper. Other questions and answers were exchanged, and I went home. There were sixteen positions that I was qualified to fill in this particular school district. Sixteen positions, and hardly any applicants. Those were the days when there were more kids than there were teachers. I was very excited. A month went by. A month and a half went by,

and nothing. Finally, frustrated, I went back to the school district and asked, "What happened? Did you fill the positions? If so, why didn't I make it?"

A very embarrassed director of personnel sat down with me and went through my credentials very carefully. "You have good student teacher recommendations. You have a 3.8 overall average in undergraduate work. You have two teaching majors, and you have good character references. But there is a problem, Mr. Garcia, with your application. You listed as your first preference English. You do have a bachelor's degree in English, but we in the school district find it quite unusual that a Mexican would want to teach English."

Follow the American dream of work hard, strive, pull, and what happens? Excellence wins. In 1984 that's what we tell kids. Go to school, work hard, and do well, and excellence is going to win. The American dream disappeared for me that day. I went back to my home town and ran into my third grade teacher, Emily Larson. We talked, and she told me, "I thought you would make a good English teacher because I taught you English." As a matter of fact, Emily Larson had taught me English because before third grade I spoke only Spanish. "But," she said, "I hope I taught you something better than that and more important than that: If you take on a profession, take it on because you want to make a difference in the lives of people." That hit me hard. She said, "In a school district where they stereotype you because of your Mexican-American background, you clearly cannot make a difference in the lives of youngsters simply because of the kind of staff that exists in that particular school district. Go where you can make a difference in the lives of young people."

I took her advice and did that. I finally found work, and lo and behold, a Mexican taught English. What is really ironic is that the first year I was teaching English, the Spanish teacher in the high school was from Amarillo, Texas. She used to begin her class every day by saying, "Buenos dias, y'all." She also taught Spanish with a Texas accent. I tried like mad to teach English with an Anglo accent.

What I learned as a young man is that language is central, not only to education, but also to politics, to teaching, to learning, and to survival. This morning, when Dr. Boyer said the centrality of language is in a sense what education is all about, he was saying something that was, from a particular point of view, extremely radical.

Minority people in this country no longer accept a second-class status. They no longer accept the back of the bus and the back of closed doors. As a matter of fact, the Hispanic population in this country will be highly influential in determining who becomes the next President of the United States. Think of the power of women, a second-class citizenship in our country, and consider that if they ever come together, we know that the next President will probably be someone like Emily Larson.

What I ask you is where will we, as educators, make a difference? Will we forget the fundamental function of education, which is liberation of the spirit, liberation of the mind from ignorance, poverty, and all the other common enemies found throughout the world?

In this conference, as we consider specific issues like buying more or fewer computers for our schools, or firing college professors, I think my role can be to prod you along to consider whether you make a difference. And if you make a difference, is it because you truly believe that education — teaching and learning — is a liberating force in our society? If you truly believe that, please join us in the revolution of our culture, a culture in which those old, trite sayings — life, liberty, and the pursuit of happiness — are not just old, trite sayings, but realities that we live from day to day.

Two Changes in Education: The Technology Era and Equality of the Sexes

Mary Johnson

My remarks are going to center on change, the changes that the League of Women Voters foresees in the education system, and the changes that I foresee.

These changes, as I see them, will focus on two areas — entrance of the United States into the era of technology, and the change in our society as it moves into having more equality for both sexes in the marketplace. Alvin Toffler wrote a book called *The Third Wave* in which he details civilization as having been divided into three eras — three waves. The first was the agricultural era, the second was the industrial era, and what we are entering now is called the information age. As our society goes through the chaos of adaptation, and as our institutions and families change to fit the needs of this new age, we see real chaos in the educational system.

Today 55 percent of the nation's work force is employed in the processing of data. In fact, for the past twenty years, more than 50 percent of the earnings of the U.S. economy have been related to this information sector. We are not just now entering this technological era; we are just now realizing that we need to play a little catch-up in our schools. Educators are certainly considered a vital part of the information economy, but the functions of education, I believe, will change. I think they will change dramatically.

One of the changes that is very easy to see will be in the vocational area of education. We will be preparing our children to work with computers, not only as specialists, but also as consumers of the computer society. Whole new occupations are opening up, such as computer electronics, computer drafting, and computer programming. These will require training in our schools. Industry will not continue to train their incoming employees to do these jobs. To accommodate this, we will need to retrain our educators and retrofit our institutions. This, of course, as Dr. Poston said, will cause some financial problems, which will exist not only because of the tremendous cost involved in buying computer equipment and software, but also because of a

continued need to update. The life-span of computer hardware and software, as we all know, is very short; we will have to figure out some way to integrate continued upgrading of this type of equipment. Our taxpayers are probably not going to want to pay the cost of brand new equipment year after year.

I foresee that the government will have to look at some additional tax credits, perhaps for individuals or industries who would be willing to donate or provide equipment for our schools. Almost all manufacturers of computer equipment hold in-house training sessions for their users and for their employees. In the future, I foresee that our school systems will be sending teachers to these in-house training sessions to learn, rather than sending them back to colleges or training them themselves. In fact, I see a real competition in the industry to attract as many teachers as possible as they see the advantage of having teachers gain expertise with their particular machines and applications.

To further accommodate this information age, math and science training in elementary schools will be beefed up. Traditionally, our elementary school teachers have relied heavily on methods courses to fulfill their certification requirements. In the future, they will need to have more hours in subject matter classes and fewer in methods courses. We have asked our elementary education teachers to concentrate primarily on the teaching of reading. In the future, we will ask teachers to take a three-pronged approach in the elementary school. We will ask them to look at math, science, and reading.

Another change is the shift from a national economy to a global economy. As far as education is concerned, there will be an increased demand for multicultural global education. Heretofore, our society's interest in bilingualism has centered on providing equal education for immigrants or the non-English-speaking segments of our society. Today we find we need to be able to operate in and with other countries on their cultural terms. Japan and Russia have very exclusive schools where people are trained solely in the cultures of other countries. They do this so that when their people come to deal with other countries on a business matter they will be able to understand what they are dealing with. Nothing like that currently exists in the United States. I am sure many of us are aware, and I was happily aware when I went to college, that the trend has been away from foreign language requirements. I see that we will be asking our people to have foreign languages, not just two classes in a foreign language, but a real proficiency, so that when we send our sales forces to Japan they will be able to understand the nuances of the culture and of the speech patterns. Inclusion of foreign language classes in elementary schools will start a real learning of those languages and cultures and will make way for new college majors with a real command of broad-based cultural aspects. In fact, I see the M.B.A.'s of the future required to have a foreign speciality. It certainly would make them marketable.

The so-called women's movement has caused a continuing change in our educational institutions, not only in academic areas, but also in athletics. Women athletes are no longer a rarity. Increasingly they

are found on the playing fields. Media attention to athletes is gradually expanding to include participation of females in sports. All over the United States we are seeing redesigned budgets as school administrators are coping with the infusion of women into the locker rooms. The budgets are changing, and locker room facilities as well. Some schools, I know, are switching locker rooms so that one year the boys get the better locker room and the next year the girls do. I expect that future athletic budgets will show different line items, primarily because there are going to be more and more students who want to participate in athletics. Probably this will include a swing toward intramural activities and new sports such as soccer.

Budget changes will be further realized as administrators recognize revenue potential in women's sports, especially basketball. In Iowa, for example, even before Title IX, girls' basketball games outdrew the boys' basketball games. Having come from Iowa, I can attest to that. It is very exciting. The gyms are always packed on girls' basketball nights.

As I look around this room, I see it is easy to support the statistics of 50 percent of the women being in the labor market. Statistically, this is expected to continue, and it offers increasing challenges for our educators. As students see more female role models in the marketplace, they will alter their personal expectations, and as a result, their educational demands. Traditional, heavily male-attended classes such as science and math will have more female attendees, while traditional girls' classes such as home economics and family living will have a more balanced ratio of boys and girls. This I see changing the make-up of the high schools.

A two-fold trend expected to continue is the lengthening of the school day and year and also the abdication of parental responsibility to the schools for the training of our children. We charge the schools to teach everything — all the traditional subjects, plus vocational skills, citizenship, domestic sciences, health and sex education, how to drive a car, mastery of a computer, and lifetime athletic skills. We further expect the schools to solve the problems that society itself is unwilling to solve. By that I am referring to the solution of bussing, which was used to provide equality of education to all students, and also prayer in the schools. Many legislators are currently trying to write new amendments to guarantee the right to pray in the schools. Schools of the future will increasingly provide after-school parenting services, such as day-care and educational and noneducational activities to fill the gap between the end of the school day and the end of the work day. With the expansion of the school day and year will come the transition to upgrade the pay level of educators. In the future, I see the title of master teacher evoking as much esteem as the title of medical doctor. It seems that educators have their work cut out for them.

Education Must Prepare Students for A Changing World

Sarah Listerud

My remarks do not reflect the official positions of the Board of Public Education. I speak for my own opinions.

Education in America has exhibited a unique and great characteristic — its ability to respond to a perceived need. The infant colonies of our new nation, sensing that democracy could not succeed without a literate populace, early on taxed themselves to establish public schools accessible to all. Frontier settlements built schools and provided teachers long before they dreamed of territorial or statehood status. The massive influx of immigrants and the weaving of them into the fabric of their new country was a task equalled by few civilizations in so short a span of time. American education of the recent past has seen 1) the growth of technical schools, community and junior colleges, and universities, 2) the correction of sex handicaps and racial biases, and 3) an expansion of the schools' role for the elementary and high school child.

Predictors tell us that society is on the threshold of a great change and that this change comes at a time when American education has lost its grip on excellence. The warning is not new. The omens have been present for twenty years or more. What is unusual is that there has occurred a general, national acknowledgment and an apparent broad will to act. The year 2000 is nearly upon us, and predictors tell us that by then America will be a very different society. Just when we have sacrificed excellence, and I believe that we have, we are challenged to prepare our youth for the changes.

Shrinking numbers of young people, a growing senior population, and changed family patterns bring a different child into the classrooms of today. In addition, we are told that America will no longer be a nation of manufacturers. Manufacturing will be done abroad, and we will supply the technology. Biogenic research, laser technology, the communications explosion, computer development, and a large service industry — including health-care, child-care, recreation, and food — will define the jobs of tomorrow.

Consider little Sam and Susie this September with their hands on the first grade doorknob. They will enter the job market in the year 2000, and their working lives will be marked by periodic returns to a classroom or a seminar. Even today large companies are faced with either sending their computer employees of ten years back to school or firing them in favor of new graduates. Much of today's education does, and will continue to, take place outside the traditional educational institutions.

What does all this mean to the curriculum for Susie and Sam? It may mean that we will provide a foundation of learning and reasoning

skills, plus a broad data bank, and that specific job tasks will be supplied elsewhere. It may mean that we impart to them a lifelong love of learning. It may mean that we expose them to the great ideas of the past in order for them to better understand the present and future. It may mean that we promote the practice of logical thinking. It may mean that we stress the importance of the world community. It may mean that we introduce the practice of precise use of English as the basis of communication, oral and written. It may mean that we honor work, the source of dignity. It may mean that we discuss the morality of technology so that the computer whiz who breaks into the U.S. defense code or into the computer of the Sloan-Kettering Institute for Cancer Research will know that he has committed a felonious act.

Future directions of American education in response to a call for excellence should be marked by a look at the present teacher-superintendent-principal training programs, an examination of recertification requirements, a rethinking of teacher tenure, a better use of class time, establishment of well-planned and relevant in-service programs in every district in the state, more attention to college entrance requirements, professional input in the quality of textbooks, and increased emphasis on math, science, language, and English.

One warning: Let us not forget the humanities. The International Chamber of Commerce says to us in our classrooms, "Give me technicians." Yet the heart and the soul must sing too, and we should never neglect history, music, and art, which nourish the soul.

The future direction of American education, in response to national changes, may include 1) workshops, seminars, and training courses organized and presented by professional associations or business corporations using members of the academic community, 2) sabbaticals and other work release plans for educational updating, and 3) apprenticeships sponsored by business communities, unions, and the armed services.

The perceived need is present, and the public waits hopefully for educators to meet it. The educational community can exhaust itself with wasteful bickering or protection of its turf, but it will lose the public confidence. To borrow from an old nursery rhyme, "Up the airy mountain and down the rushy glen, we daren't go a'hunting for fear of little men." May the education community rise to this formidable task with humility, forsaking pride; generosity, forsaking covetousness; courage, forsaking cowardice; vigor, forsaking sloth; and finally, with a healthy dollop of common sense.

The Future of Education: Instruction, Curriculum, and Leadership

Jim Longin

I am going to limit my comments to three major areas: instruction, curriculum, and instructional leadership.

We have an opportunity that we haven't had for some twenty years and maybe longer. During the time of Sputnik there was a great national surge to do something with regard to education, and I don't think we have seen the likes of that again until today. The years 1983 and 1984 provide us with an opportunity that I think we ought not to pass by. A variety of reports on education have been issued. You have heard reference to a number of them. You have probably read them all. A number of them are politically based, and it is important to keep that in mind. They were written for the politician and the policymaker, and some of what is said is not really too meaningful to those of us who are educators. *A Nation at Risk* is one such report. Also, some specialty reports are coming out that are oriented to curriculum-related issues; maybe we ought to be looking at those. Some are written by educators for educators, and I think we ought to pay attention to those. Here in Montana, we need to look at ourselves in relationship to the types of things that these reports might be saying.

What direction might we move? Results of a State Board of Public Education questionnaire suggest that strengthening the content of curriculum is of the utmost importance. Forty-six percent of the respondents indicated that as a priority. What does that mean?

Currently, our curriculum is pretty much dictated by textbooks. That's unfortunate. You and I both know that textbooks are simply one tool in the toolbox of sources serving our teachers' instructional efforts. Unfortunately, they have become **the** tool. There is a need, I believe, to clearly articulate the core of common learning considered essential for the students of Montana and the students of the nation.

In 1983 Ed Argenbright, Montana Superintendent of Public Instruction, formed a task force to look at realistic expectations for students graduating from Montana high schools. This Task Force on Excellence ended up trying to identify for a K-12 population the graduation expectations that might be considered legitimate. It was made up of representatives from the labor force, vocational education, colleges, and high schools; school administrators, teachers, and even students had input in terms of what these expectations might be. The results have been printed and are available. You don't have to go through that process again. The expectations have been defined. They are a core consisting of expectations in reading, writing, speaking and listening, reasoning, and careers.

I believe that we should begin teaching toward these expectations. That is hard because each of us might look at that a little bit

differently. Right now, what do we do? We teach reading, writing, arithmetic, and other subjects, when perhaps we should first be teaching process-oriented skill development, and then content-oriented development.

Process-oriented skills include critical thinking, language, math, study skills, social skills, and practical skills — how to bake bread, for example. They are quite different from content-oriented courses such as geometry, trigonometry, calculus, advanced math, and social studies. We ought to put more emphasis on the processes that we use in acquiring and utilizing or applying available information.

If we really want to dream, perhaps we ought to be looking at ways of utilizing the technology that makes information available to us, acquiring that information — not necessarily through the school setting, but through television and the computer — and then making the schools into the labs of application. If you want to dream, dream that way rather than asking, "How do we plug this hole today in terms of the system we have?" I would challenge us to do a little dreaming rather than just plugging. I worry about always trying to plug what is, and I would like for us to at least be looking forward and trying to be a bit innovative. During the 1960s we had a lot of innovations. It is time to shake the dust off and begin to move forward with some of those ideas.

I think moving from general goals to specific learner objectives that have been carefully planned and are well-defined in scope and sequence is essential. We must be able to tell the kids what it is that we expect them to learn. We must know that ourselves. We are not very good at it. That is why, typically, we buy textbooks. And why are textbooks written? To sell. Not to do good. To sell. To make money. Remember, they are a tool, but they are only one tool.

Montana's Board of Public Education has already addressed the issue of requiring more basic academic course work. We are going to require more units of math, science, and social studies. More might be better, but it's my hope that we are also looking into the content of more math, science, and social studies. It amazes me when reports start talking about three years of English or three years of math. What's math? The reports say you ought to have algebra, geometry, and calculus or trigonometry. And then you can ask, what's algebra? There is pre-algebra, algebra I, algebra II. So we have a lot of definitions to take care of before we have too great an impact.

Beyond that, the Board of Regents has also adopted a statement on expectations for entering college students and the courses that should be taken previous to their entry. It seems to me that there may well be a need to ensure a sincere effort for significant dialogue to occur among the college professors who work with the new freshmen and the high school teachers who work with the seniors so that the typical gap, the distance between what is and what is preferred, might be addressed.

Accompanying the strengthening of the curriculum, there will be a need for a monitoring design, using both standardized norm-referenced tests and criterion-referenced tests to assist in the process

of evaluation. That's something we are not going to get away from. The age of accountability is here. A monitoring design is essential. There are moves right now from the state level to come up with a standardized testing program for statewide information purposes.

Moving beyond curriculum improvement, it is my contention that there must be a corresponding effort to assist teachers in refining and developing their teaching skills. In terms of instruction, we will be and must be concerned with how learning takes place. In colleges and universities, our teacher training divisions must focus, first of all, on identifying and recruiting a higher caliber of candidates for the teaching profession. Second, they must provide a training program far beyond what we typically hear characterized as Mickey Mouse courses.

When I got into the education business, and that's been a few years ago now, it really used to frustrate me when some of my friends would refer to "those Mickey Mouse courses in education." Here I was trying to make a place for myself and my family and have an impact upon other human beings. And the course work we were using was allegedly Mickey Mouse. That's the way a lot of people look at the kind of programming that goes on in our institutions. We have to change that. Those of us working in the field have to speak strongly about the programs that are being offered, and the institutions that are offering programs have to ensure that they are, indeed, very strong.

Beyond what the colleges and universities are doing, we in the local schools will have to move forward on heavy staff development programs. We must get serious about that, and we must provide the resources in order to carry it off.

The major area needing attention, I believe, is teaching strategies. A lot of effort must be put into that. Which current teaching strategies are most effective with our student populations? How do we model that? What do we do to help teachers develop their skills toward that end? What about the learning styles of students? Much good research is now coming out on learning styles. We have to stay on top of that.

We have to know about left-brain/right-brain materials. Similarly, brain plateauing and what that means for youngsters at various levels might be useful in terms of expectations as we formulate our organizational designs.

I believe that teachers have to be literate about computer technology, not as knowledgable as programmers, but informed enough to know how to turn a computer on, select a piece of software, and utilize it in the class for assisting and enhancing their educational efforts.

Our teachers, our workers, our kids, everybody needs training in drug and alcohol prevention.

There have to be ongoing curriculum content updates. The new knowledge that is evolving out of the various curriculum content areas must be made available to us in capsule form. We can't be expected to read all the research that exists. I see workshops being presented in that area.

I would like to comment very briefly on instructional leadership, educational leadership. The research, as you well know, suggests that the principal has a very pivotal role in bringing about effective schools. I believe we will see much greater movement in providing professional development opportunities for principals as well as other administrators. Superintendents will be expected to provide the general leadership for the school system. The principal, however, must provide the local-level expertise, dedication, and commitment. The principal will be expected to articulate a schoolwide emphasis on the basic skill achievements. Think for a minute about whether or not your principal, if you are a teacher, could actually do that. Some retraining will have to take place.

The principal should also set high expectations for teachers and students. I perceive a principal acting as an instructional leader. This, I believe, will require refocusing on the reason we have principals, the reason we have administrators.

All these changes require a high degree of persuasive skills that many administrators currently do not have. We need help with this. There will be a need to ensure that key groups in the district know about the school improvement efforts and about their purposes, support, and implementation. We heard earlier about the need for a forum pulling together the various constituencies within the educational world. In Montana we have been involved in that task for approximately a year. The Montana Education Association, the American Federation of Teachers, the Parent-Teacher Associations, the Office of Public Instruction, the Board of Public Education, and college and university people have been represented. About every major organization in the state of Montana has been involved in a venture to articulate the common areas of interest that indeed do need support from the whole group.

Although a lot of reports indicate to us that the nation is at risk, I think that here in Montana we have a bright future. We have to be optimistic. I don't believe some of what I've heard from other presentors. I think things are going to roll smoothly. We have to be pleased that we are alive and remember one thing — the reason that we are all doing this is because we love kids. Otherwise, we wouldn't be in this business.

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Summary, Question/Answer Period

1. Teachers in America should take the leadership for determining the future direction of education.

2. Montana laws require that boards of education at the local level establish educational directions and educational goals.

3. Classroom teachers must play the most important role in developi ng the educational climate. However, the consumers can't be left out.

4. Those who pay the bills — the public — will ultimately determine what it is they want from their schools.

5. There does not seem to be any single leadership thrust in Montan a for the sake of public education. Many groups are talking about how we need to get together, but no one seems to be leading such an effort. There is a lack of any aggressive leadership.

6. The leadership responsibility for education becomes extremely complicated and sometimes chaotic because it is a little like herding goats without a fence. Many disparate forces are all taking a certain part of the responsibility, and the leadership responsibility then is to bring all of them together and make some sense out of them so that the direction in which education does go is at least congruent for the whole culture.

7. Administrative leadership, in terms of direction of education, has probably been in short supply.

8. At the Montana Education Association delegate assembly in Octobe r 1983, the creation of a teacher standards and licensure board, with the majority membership being teachers, was discussed. In 1975, when this idea was first introduced to the state legislature, it was defeated as a result of opposition by colleges of education, various associations of school administrators, and others. Teachers are willing to take up that responsibility; the question, then, has to be, is the public willing to allow the professionals to have that responsibility?

9. For too long, teachers haven't had ownership of some very fundamental decisions about what happens in teaching and learning.

10. As long as our philosophy in America is to educate as many peopl e as possible, and as long as we are not putting more resources into education as compared with our competitors, we are going to have some problems competing with other nations of the world.

Third General Session

A Nation At Risk

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A Nation At Risk

Emeral A. Crosby
Principal
Northern High School
Detroit, Michigan

Northern High School: An Introduction

I'm going to spend a few minutes telling you about the graduation exercise at my high school. One reason I feel good about this graduation is that the Department of Education last week listed across this country something like 220 or 210 schools that were recognized as outstanding. I looked at the list. One of the schools listed was from Detroit — Cass Technical High School. Last week, just before graduation, I decided that I was going to review my graduating class. My school will never be listed as one of the outstanding schools of the country, although to me it will be one of the outstanding schools, and I feel good about it. When I looked, I saw that I had 203 graduates, the largest number of graduates that I've had in a long time, even when I had close to 2,000 students enrolled; now I have only 1,300. Then I looked back four years ago at that class, and I saw that I had 344 students coming in. When I did my multiplication and division, I recognized that 60 percent of the entering class had graduated from high school.

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Then I looked at what was happening across the city, and in terms of percentage of graduates, my high school ranked third highest in Detroit. The first school was Renaissance High and the second school was Cass Tech. At Renaissance High, you can't even get in unless your grandparents had perfect attendance. You've got to score B or better, you've got to be ranked in the 100th percentile or pretty close to it, and you've got to have recommendations from everybody who is important. And not only that, but the best teachers in the city, or those who are considered the best teachers, are selected to teach there. When people were setting the school up, they said they would not take any more than one teacher from any high school, but they took five from my school.

The retention rate at Renaissance is about 100 percent. Cass runs about 90-some percent. At Cass, you'll find almost the same credentials except that students have to have a C to get in. My school is almost the reverse. In a lot of schools in Detroit, you can almost reverse the retention rate. I know some schools that start out with over 1,000 students and graduate about 300. I catch it because I have, if not the lowest, sometimes the next-to-the-lowest test scores. I am right at the bottom for test scores, and test scores are important for a lot of people. They may be important to you; perhaps you would judge a school as being great because of the test scores.

But, you see, I know that I have kept a whole lot of kids out of trouble. I've gotten a lot of kids to hang in there in order to graduate, and to me, that's important. All the statistics say if you can get them to graduate, if you can keep them out of trouble by the time they get to be seventeen, by and large, you have made it. So I felt good.

And I looked to see how many had applied to and had been accepted for college. I had 129 out of 203. A few years ago we would have had 15 percent or 20 percent. But 64 percent of that 203 had applied to and been accepted for college.

Those who were eligible for some kind of assistance, basically financial aid and loan grants, were entitled to $433,000 for the first year. If they remain eligible for four years, the total will be something like $1,700,000. And they probably will stay eligible because when you start talking about high unemployment, you are talking about the Northern High School attendance area. When you talk about single-parent families, you are talking about the Northern High School attendance area. If you talk about over 50 percent of the kids being eligible for free lunch, you are talking about the Northern High attendance area. If you talk about one of the poorest congressional districts in the country, you are talking about the Northern High School attendance area. So I felt pleased about the financial aid.

But let me tell you something else. I woke up the day after graduation with a headache. I hadn't had headaches since I first started teaching in junior high school. I had headaches every day until I decided that if I was going to stay in education, I wasn't going to have any more headaches. Those kids were going to have some headaches, but I wasn't going to have any more headaches. But I had a headache Wednesday morning when I woke up because those kids were probably the most joyous and enthusiastic group that I have

had graduate.

I have to back up and tell you that last year Northern got a new band director and a new vocal teacher. I had always told my band director, "Look, I recognize we have problems in music." Our kids come to Northern, and they have not had instrumental music before. That is not true for all of them, but most haven't had it, so we teach them music beginning in the ninth grade. If they want to learn music, they learn with whatever instrument we happen to have, not what they want to play. Anyway, I told our new band director, "If you teach the kids nothing else, you must teach them to play the national anthem for graduation."

I heard the band was practicing every day. I wouldn't even go to practice because I didn't want to be disappointed. I'd just wait and be disappointed on graduation night. We have our graduation in the Stevenson Building because we have to have it where it's free. My students can't pay extra money. The auditorium holds probably 2,000 or 3,000 people, so I don't restrict the number of people who come, partially because so many of my kids are the first kids in the whole family to graduate from high school. Whoever wants to come, let them see this because this is important to them. I have had families come up and say, "Mr. Crosby, you've got to help me get one of my kids through high school. I've got seven kids, and this is the last one. He will graduate. He will graduate. If I have to take him through, he will graduate."

At graduation I always have to tell the people that this is a dignified occasion, one of honor. It means so much, we don't want it to be a carnival. Graduation is my show. So I got the people quiet, and we are getting ready for the national anthem. We stand, and the color guards come up, and I give the signal to the band director to begin.

The director does something, but there isn't any music. Now, I have worked hard to get this group quiet and ready for the national anthem, and nothing is happening. So I look and he moves across the stage, comes back to the center, and nothing happens. I am starting to sweat now. The color guards are standing at attention, and the lady who is going to give the invocation is getting restless, and she is starting up to the stage, and I say no, wait, not yet. We waited again, and he went through it again. I was ready to do something awful to him. And then, finally, the band started, and the music sounded kind of like the national anthem.

They went back through it again; and they hit a little chord here and a little chord there, and you could hear a little bit of the national anthem in there, but it was something else too. And finally, they broke loose, and I have never heard the national anthem sound that good. Then, when they were almost finished, the director got a drum roll going, and the horns responded, and then he went to a drum roll again, and then another group responded, and then he would drum roll and then another group responded. I am telling you the truth: I have never felt so exalted in all my life. And then even the choir did the same kind of thing. They really performed beautifully. So the next morning, I really had a headache, but it was one of the best headaches I have ever had.

Now you've heard about my graduation, and why we will never be ranked as one of the top schools, but I want you to know that I know that if I get 60 percent of my kids graduating, and I can get a band director who picks up kids who never played before and gets them to perform as a unit, we are in good shape.

The *A Nation at Risk* Report and the State of American Education

Now I want to talk with you about the *A Nation at Risk* report, and about the shape of American education as a whole. The idea for this study came about because the Secretary of Education was aware that if there was going to be any reform in education in this country, the American public had to be aroused about the issue. He formed a commission to study education — the National Commission on Excellence in Education — and decided on eighteen people to serve on it. I don't know why eighteen. But I do remember there was another person back in history who wanted to do something noble, who had a mission he wanted to extend to the rest of the world, and he chose twelve. I figured times must be hard now; people must be extremely difficult, so you need more people.

Who were the eighteen people? The Secretary asked various groups around the country for recommendations. He went to the National School Boards Association and to the National Governors Association. He didn't go to the American Federation of Teachers and the National Education Association, but he took the teacher of the year, and that year the teacher of the year happened to be a member of AFT. He went to the National Association of Secondary School Principals, and that's how my name was included. Once all the names were in, then another committee had the responsibility of going through the lists of names and making recommendations to the Secretary. They were supposed to select these people by race, geography, and sex.

The Secretary called us together and told us what he wanted us to do. He also asked us what we would like to do, what some of our concerns were in terms of dealing with education. I want to share this with you because when he called us together, there was no way that I thought I would be critical about American education. I didn't think anybody could convince me to be critical about American education, even after twenty-six years in the public schools of Detroit, where I had seen in the last five or six years, because of declining enrollment, districts lose some of their young, promising, bright teachers. I had seen lack of funds cause districts to be dissolved, some of them consolidated, and many of them unable to order supplies and materials, or unable to pay for them. Yet I still was not ready to be critical about American education. I am from Detroit, a large urban district, where we have some additional problems because we are involved in desegregation, bussing, and bilingual education. Still I was not ready to be critical about American education.

There were other people there who had high on their agenda tax tuition credits, the voucher system, dismantling the Department of Education, and merit pay, and they were not ready to change their agenda. But when we moved across this country and started talking

to students, teachers, parents, business and community leaders, and administrators, when we visited programs, and when we visited schools, I had to change my opinion. I definitely decided I would be critical about American education.

When the people who'd had their agenda set got back, they pulled those points off their agenda and refused to discuss them because of what we'd seen, heard, and experienced. We recognized that many American kids were at risk. And when our kids are at risk, our nation is at risk. We decided that those items in which we might have a personal interest were minor if we ended up losing the kind of government that allows us to make choices. If we lose that, then we have no choices at all; and if we lose our kids, if we lose the future of our kids, then we cease to be.

If you look at the report, you will see that there is no minority report. Not because we voted on what was included, but because we discussed it, we debated it, until we came to a consensus. Then we determined that we were going to move across the country and make our research available to the American public, and that we were going to ask the American public to let us know about some of their concerns. We decided on six hearings across the country.

We hardly got started before the whole country started saying, "We want more than six hearings. We want to be heard in our section of the country. We have something to say." So we expanded our schedule. Wherever we could get two or three people on the Commission together, we had a hearing. Generally these meetings lasted about two or two and a half days. The first day we generally met with the leaders in the community. The next day we visited programs. It didn't make any difference whether the programs were in private, parochial, or public schools, in business, or industry. We visited anybody who was involved with the training of the people in this country, military included. The next day we heard testimony from anybody who wanted to talk about education. Once we collected all that information, we were ready to work with it.

I know that there are a lot of you who read our report, and that when you read those thirty-six pages you were angry. Thirty-six pages, and you were disturbed. Thirty-six pages, and you were disappointed. Thirty-six pages, and you felt betrayed. Seven thousand words and you were hurt, angry, disturbed, and felt betrayed. I want you to imagine how I felt. Not after reading 7,000 words, not after reading thirty-six pages, but after reading thousands of pages on American education, over a million words and hundreds of hours of discourse on the subject. If you were hurt and angry with 7,000 words, imagine how I felt.

We had some pretty smart people in that group, and we knew that if we came out with a 400-page report, the Commission was a total failure. You know what happens with a 400-page report. It goes into the archives, and probably sometime in the future somebody doing a doctoral dissertation will pull it out. Total failure. We called in some experts and asked them what size document we could expect the public to read. They said, "Dealing with your content, it must not

exceed 150 pages." Now that tells you something about education. If a publication exceeds 150 pages, don't count on it being read. We rewrote our report about fourteen different times, with everybody taking a crack at rewriting and refining what we wanted to include.

At the same time we were working on our report, we knew that if the public was not aware of it, we would still be a failure. We decided the only way to get it to the public was through the media. We realized that education is not news at all unless somebody gets raped at the high school; we knew we needed a newsworthy angle. Then we agreed that the media also deals with failure. In fact, I would say that the media has a morbid propensity for failure, and what is the greatest of all human failures? War. One of our bright people put together a statement that if any other country had done what we are doing to education, it would be considered an act of war. We used words like disarmament. And what's another indication of failure in this country? Mediocrity. So we threw that in too. What happened? The media grabbed it hook, line, and sinker. Overnight, education was elevated to the number-two news spot in this country, tied right up there with crime.

Our next task was to make sure that our report did not look like a government manual. We did everything short of breaking the law to make sure it did not look like a government manual. Also, the report was supposed to be entitled *A Report by the National Commission on Excellence in Education.* Who in the world is going to spend $4.50 to buy that? We came up with the name *A Nation at Risk.* With that title I am sure that some of you would have bought it without even knowing what the contents were. That was part of the strategy as well.

When you look at the report, it looks like it's an attack on high schools. You have to understand that the high school is a very special institution for Americans. It is the last institution that our young people attend before they become adults, move out into the world of work, and get involved in social policy. The high school is a very emotional institution. It is still the institution in which we have our class reunions and our homecomings. If you want the American public's attention, you say something about the high school. We wanted attention because we were dealing with some serious questions and concerns about American education as it stands today and as it will stand in the future.

Changes in United States Over the Last Twenty-Five Years

Secretary Bell asked us to look at what has happened in this country in the last twenty-five years. He also asked us to compare American education with that of the most advanced countries.

I'd be one of the first to agree that our schools are successful. They're one of our most successful institutions. Everything we have asked our schools to do, they have done, and have done exceptionally well. The philosophy and concept of American education is the greatest source of achievement of humankind. Schools are our number-one

institution, our most imitated institution. But the Secretary didn't ask us to deal with how successful our schools have been. He asked us to deal with how successful our schools must be in moving our youngsters into the twenty-first century. He also wanted us to recognize that our kids are not just competing against the kids they are sitting next to, or kids across the state, but against kids from all over the world.

There have been some tremendous changes in this country and around the globe in the last twenty-five years. Not only scientific and technological changes — not only that man has stepped on the moon, that we have created satellites that have gone past Jupiter and Mars and out of the galaxy, and that we have been performing experiments on Challenger and Columbia that we cannot perform on earth — but other changes as well. There have been changes in the roles and responsibilities of women. Probably twenty-five years ago, a woman only had five occupations from which to choose. Now employment options have opened up. The same is true for minorities. We have had a change even in dealing with authority. Twenty-five years ago everybody exerted authority. Now nobody wants to touch it. As a result of Vietnam there have been tremendous changes in this country in terms of our attitudes, our integrity, and our sense of vulnerability.

There have also been changes in some of our basic institutions. Nationally, we have defined what is taking place in our institutions — they are in serious trouble and are deteriorating. One of the structures we are greatly concerned about is the family. We still talk about the typical, ideal family as being a husband, wife, and two kids. That kind of family constitutes only 7 percent of the families in this country. That means 93 percent are something else. But the family structure of greatest concern to us is that of the single-parent family. When we started this report, the figures said that the single-parent family constituted one in six. By the time we finished, single-parent families were one in five in urban areas, most of them headed by women. Most of the women are working, and this is considered the fastest avenue to poverty.

Figures since 1970 show that nearly 50 percent of the marriages in this country end in divorce and that nearly 50 percent of the kids in kindergarten and first grade can expect to be part of a single-parent family before they graduate from high school. That means 12 to 14 million youngsters live in single-parent family situations. Besides that, if most of those single parents are working, it means that most of those kids are latchkey youngsters. Even where we have two adults in the family, 53 percent of them work, and their kids also belong to the latchkey group. Many kids don't even know how to play because they avoid peer interrelationships and adult interaction. Their greatest interaction with adults takes place within the schools. Yet as a national society, as a government, we are not addressing that problem. Business and industry do not allow flex time or provide day-care centers. Schools by and large set up their conferences during the time in which parents are working. Kindergarten in this country is primarily a half-day program, and that imposes a problem. We have

further problems in dealing realistically and fairly with minority students and students who are immigrants. Yet we are not ready to offer the resources to help deal with these problems that confront large numbers of our number-one resource.

When we started to compare our educational system with others, we found that as a nation we expect less and demand less of our kids than any of the advanced countries of the world. For example, we looked at attendance. In this country we have a national allowance for our kids to be absent 10 percent of the time. Ten percent of 180 days of the school year means that our kids go to school on an average of 160 to 161 days. We looked at Western Europe with a 220-day school year and Japan with 240 days. They expect their students to go to school every day. We build in a 10 percent absence allowance. In the urban areas, that reaches as much as 20 percent. Why can't we expect and demand that our kids go to school every day? What else do they have to do? We still operate on an agrarian calendar which is over 100 years old. I am still waiting to see how many kids in Detroit and in my own school spend their summers harvesting crops.

We also looked at textbooks and found that they have been declining in terms of the challenge and demands that they place on kids. Educators have been buying textbooks based upon how easily the kids can work with them without having any supervision and support. We found out that major first grade textbooks around this country introduce 180 to 184 new vocabulary words a year. The school calendar is 180 days. What is it, a one-a-day vocabulary vitamin? We looked at the textbooks used in 1940. Those textbooks introduced 450 words a year. The same textbooks in 1930 introduced 656. The highest number of words per sentence in a typical textbook we looked at was 9.2 words. In a typical textbook from 1960, the average number of words per sentence was 23. If we keep that rate of reduction going, by 1990 we'll have one-word sentences. And we select the textbooks, not the kids.

One criticism we heard of our report was that we were promoting elitism because we were recommending three years of math. Three years of math is elitism. Can you imagine that? Here we are with half a million people out of jobs because of the automobile industry, or the steel industry, and we cannot retrain them. Do you know why we can't retrain them? Because they haven't had math. By and large across this country, the criteria for math for graduation is one year, which a kid can complete by the time he finishes the ninth grade. Here in this highly technological age, critics of our report are saying we should perpetuate that problem. No more math. One year of math. Can you buy that? Today's student is going to be a part of our adult society, our work force, for the next twenty-five, thirty, thirty-five years. He is expected to change vocations four or five times, and we say, no, we don't want to be able to retrain him, so let's not give him any more math.

Or look at science. In this highly scientific age, are we going to say that one year of science, usually tenth grade biology, is sufficient? I don't say that everyone has to have calculus or advanced physics, but everyone needs to know what is going on.

Americans Have Dropped the Baton in Education

Let me give you an example of what our report is really all about. About three years ago my high school was involved in a track meet for the city championship. Three schools had a good chance of winning that meet, and Northern was one of them. The coach figured that if we could win the mile relay, we might have enough points to take us through. So he selected four of the top runners to run a mile relay. He chose Brad to lead off. Brad was a hard runner, one of the top runners. There was no doubt that we could count on Brad holding his own. He selected Vance to run second. Vance was the second-fastest man on the team, one of the fastest runners in the city. There was no doubt that Vance would hold his own. In fact, we expected Vance to give us some ground, so Vance ran second. Then he had James running third, a hard worker who came to practice every day. We knew we could count on James giving it his best. As an anchor man, running fourth, was Jerome. Jerome was our fastest man, and was reported to be the fastest runner in the city. He had won all-state honors the spring before. He went in the record books for the low hurdle. He was undefeated that spring in the 220 and the 440, so he was running fourth. The race began and, true to all expectations, Brad held his own.

By the time Brad had completed 440 yards, he had a 10-yard lead on his closest challenger. He moved into the transition lane and he passed the baton off to Vance. Vance exploded on the track. You could see with every stride he was gaining ground. By the time Vance had completed the 440 yards, he had a 40-yard lead on his closest competitor. He moved into the transition lane, and he passed the baton off to James.

James had a 40-yard lead when he took off, but as we watched, we knew it was still a race, because we could see that James, with every step, was losing ground. Before James completed 400 yards, he had dissipated the 40-yard lead, and now he was shoulder-to-shoulder with the leading challenger. Before he got to the transition lane, the runner moved up and passed him. And as he did, James, in desperation, reached out to hit or to push him. Fortunately, James didn't touch him. But at that moment, disgusted and unconfident, James dropped the baton. As he dropped the baton, he dropped his head, and he started walking off the track. The coach yelled at him, "James pick up the baton, pick up the baton," but James didn't hear him. With his head down, James just kept walking off the track. And the coach yelled at him again, "James, pick up the baton. Give Jerome the baton. Give Jerome the baton." James didn't hear him. And there was Jerome, the fastest runner on the team. The fastest runner at the meet. All-state honors the spring before, and in the record books for the low hurdle. Undefeated that spring in the 220 and the 440. Loaded with talent, loaded with skills, and he never got a chance to run because James never gave him the baton.

We are all James. We are James as parents, as teachers, as administrators, as professionals. We are all James. But most of all, we are James as voters. We have dropped the baton on the most

promising youngsters the world has ever produced, youngsters who are so loaded with talent and skills that it's a burden to them. We have dropped the baton at a time when these kids are competing not just with each other, but with kids from all over the world. They are competing with kids from countries who used to be our partners, but who now are our adversaries, kids of countries so competitively fierce that they would invest anything in their kids to see that their kids have the advantage over ours. We have dropped the baton. We have dropped it at a time when transportation and communication are so advanced that what happens anyplace in this world instantaneously affects the whole world, and at a time when information is doubling every five years. Yet we keep giving our kids less and less time, and we keep expecting them to know more and more.

I can cite an example from Michigan about how we're giving our kids less time. Since 1964, we have taken each year fifty days of school from our kids. Yet we keep expecting them to know more and more. Our situation is not like that of an athlete who has won some medals and set some records and decides to retire. As a nation, as a profession, as a society, we do not have that luxury.

We Must Demand and Expect Excellence in Education

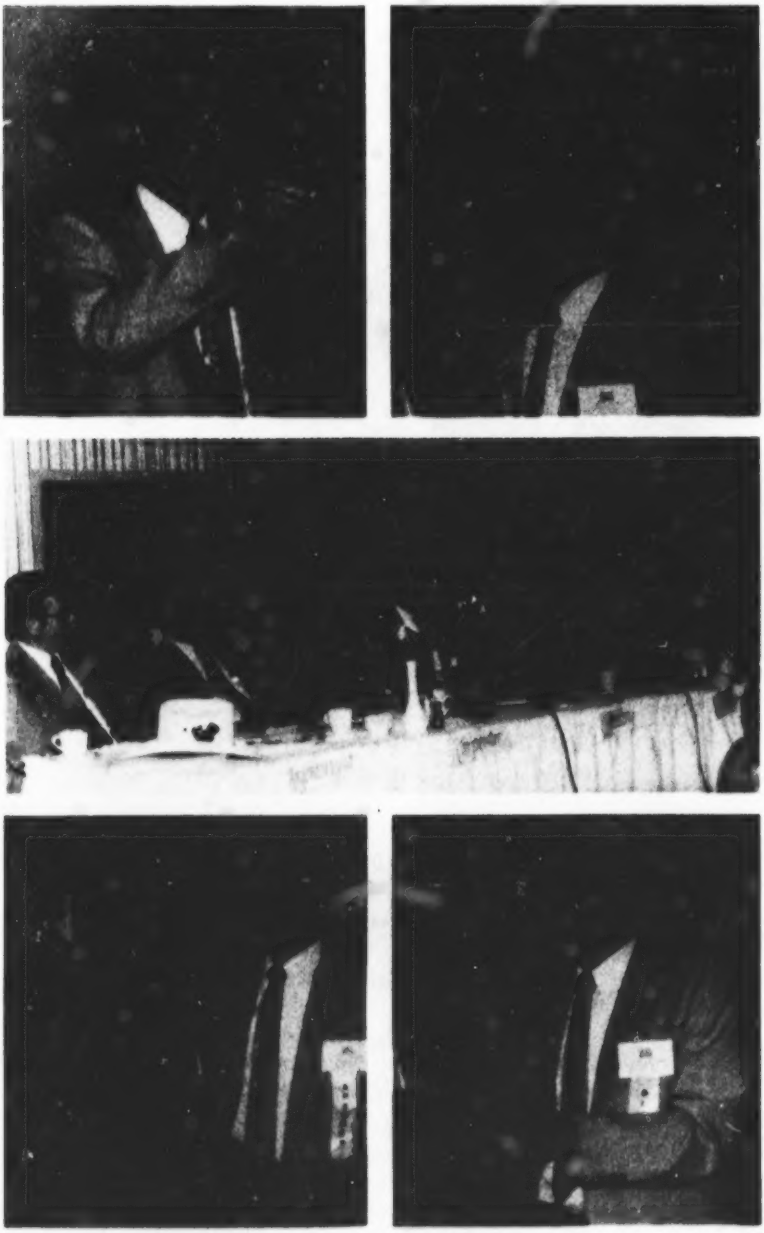
We have a moral responsibility to prepare our kids to be productive citizens. We will not remain a strong, viable country based upon how many missiles we have, how many bombs we have, how many tanks we have, but on whether or not we are willing to provide equal access to knowledge and quality education for all of our kids regardless of race, creed, color, or economic status.

We must also expect and demand exemplary performance and excellence from our kids. We must expect it from them, and we cannot wait until they get to high school. We must start at day-one expecting and demanding it from them. We cannot accept mediocrity in anything because as soon as we start accepting it in one thing, it won't be long before we start accepting it in everything. We must demand and expect excellence. If there is no other institution in this country in which to start, then we must take the initiative and start it ourselves in education.

We must demand and expect excellence in education, because if we do not, it won't be long before we stop expecting and demanding excellence in medicine. It won't be long before we stop expecting and demanding excellence in business and commerce. It won't be long before we stop expecting and demanding excellence from our courts and from our lawyers. It won't be long before we stop expecting and demanding excellence from our craftsmen, our technicians, our pilots, our mechanics, and it won't be long before we stop expecting and demanding excellence from our government and our elected officials.

What our kids are involved in now is no athletic event. It is far more serious than that, and if we don't pick up the baton, and if we don't

listen to the coaches, it does not mean that our kids will be second or third. We may be denying our kids an opportunity even to participate in the race.



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Panel of Reactors

Moderator: Dave Rye, News Director, KULR TV, Billings

Panelists: Irving Dayton, Commissioner of Higher Education, Montana University System, Helena

H.W. Swede Hammond, Montana State Senator, Malta

Esther Bengston, Montana State Representative Shepherd

Ed Argenbright, Superintendent of Public Instruction for the State of Montana, Helena

Russ Hart, Chairman of the Board, Hart-Albin Company, Billings

Mark Jones, President, Billings Education Association, and Teacher

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Dayton:

I would like to give a few quick reactions of my own to the report *A Nation at Risk*, tempered now by what I have heard Dr. Crosby say. I think this report is extremely important because it has put the whole business of education on the public agenda, and it certainly is true that no number of Ph.D. dissertations on library shelves will do that, even if they are right on target. We pay the price for this attention. One of the prices, I think, is simply getting things a bit out of balance. The part that bothers me is the beginning of the report. For several pages, education is put in a framework of competition, as though it were a global version of Monday night football. The idea that "we've got to get ahead of the Russians" appears a lot. Unfortunately, that may be the only thing that will catch the American public's attention, even though education in my opinion is extremely fundamental to all of us as individuals and to the country as a whole.

The report also tends to hit hard on the subject of manpower supply for industry. Again, the global competition issue. I think it is very important for educators to remind the public that we are supplying educational opportunity for people, that we are in the business of human development, and that the two aspects, manpower supply and human development, have to be kept in balance. The educational system is not simply a machine for providing trained manpower for industry. It goes far beyond that. I think it is up to us to keep that subject in front of people because otherwise it tends to get superseded

by the competition issue, by the economic, the manpower supply issue.

I think the report has raised a lot of very good points. There has been, and will continue to be, a lot of discussion about it. I would like to look at one or two of its comments. One is the question of time. Recommendation C discusses the problem of "time on task" and school day interruptions. In my opinion, the report left out the biggest single problem — athletics. Practices and competition are producing more disarray in the school day, I think, than all the other problems put together. There is very little point in extending the school year if we are simply going to waste time at the same rate we have been. I think the problem of the place of athletics in the school really has to be faced. We have to examine the issue of extracurricular being "extra," outside the school day, rather than preempting instructional time.

The Montana School Boards Association has dodged the athletic issue with a really mealymouth statement. It says, "School boards need to take an active role in the MHSA (Montana High School Association) and attend the MHSA convention." That's the understatement of the century in terms of who is controlling school time in this state. The school boards are practically admitting they don't, and it's about time they do.

There are two recommendations in the report on teaching. One has to do with incentives to get people into teacher training programs, and this has gotten a lot of national attention. There is talk of fellowships, loan remissions, active recruiting of students, and so on. In my opinion, the important recommendation on salaries has gotten very little attention. That recommendation basically says that if you want good people, you have to pay a competitive salary. This costs money, and that's about the time people start looking the other way and whistling, hoping things will go away. It doesn't do any good at all to recruit people into education at the college and university level if, at the end of their teacher preparation program, there is no place for them to go in terms of a competitive job opportunity. Go to the college placement offices and you'll discover why there is a shortage of math, science, and vocational teachers. Graduates in engineering, computer science, physics, and math are getting offers of $25,000-$30,000 a year. Compare that to the starting salary in your school system, and you'll know where the math teachers have gone.

Recruiting people into the college teacher-prep programs doesn't get you anywhere at all unless you also can say, "Here is a profession which is rewarding in itself" — and the rewards have to do with issues of professional status such as class interruptions and financial compensation — "and it offers you a reasonable future." In this sense, too, I think the School Boards Association is in exactly the wrong place. They advocate raising entry-level salaries. Good. But then they say, "Reduce the number of steps to eliminate the vast disparity between entering and final salaries," which, in my mind is totally wrong. What they are saying is, "Compress the salary scale so there is no incentive whatsoever to stay in teaching more than a few years." If you want to get good teachers in the profession and keep them in, you have to offer them something that amounts to a future.

It is very discouraging to meet ex-teachers, and I seem to meet a fair number of them — bright, active, energetic, interesting people who used to teach and are now doing something else. I often ask them why they are doing other things. In many cases, it has to do with working conditions, but it also has to do with the question of a long-range professional future. Clearly, if you compress the salary scale, you have said to people, there is nothing to be gained by staying in this field. Work for a few years and get out, and get a good job somewhere else. I think we have to make a professional future for the kind of people we want to have in the classrooms. *A Nation at Risk* says that. Unfortunately, the public hasn't picked up on that recommendation.

Hammond:

I have spent forty years in education and I have taught all the grades, first through twelfth. I feel that the school boards have a lot of responsibility, but we have continually taken authority away from them. I have always been very excited about local control. I think that the needs of communities differ from place to place, and we have to continue to keep that in mind. It is certainly true that we are now going to be competing on an international basis, but we still have to live in communities, and we are touched probably a great deal more by what exists in those communities than by what exists throughout the entire world.

I have spent time in the forty-eight continental states, and I have always been rather surprised by the needs and the differences from one school system to another. I agree that we have to demand a great deal more from youngsters, and we have to demand a great deal more from teachers, and we have to demand a great deal more from parents. I think one of the things I was most successful with was getting parents to visit schools and getting the students to realize that parents were interested in what they did in the classroom as much as they were in what they did in music, basketball games, football games, and so forth. I think education is a full-time job, and I think we are going to have to convince parents of that.

Bengston:

Certainly there was some disturbing news in *A Nation at Risk*, but I think there is room for optimism. What a fantastic, wonderful time to be alive, to tackle such problems.

I am going to talk a little from my perspective about the financial commitment that Montana has. I am the education subcommittee chairman on the appropriations committee. We have made some financial commitment, I think, in the state of Montana, particularly in the last two sessions. We are still behind the national and regional averages in higher education, but that gap is being closed gradually. In fact, we are only about 3-4 percent beneath the national and regional averages. In the elementary and secondary schools, we are above the national average.

Whether the average is what we are striving for is another question. We in appropriations, of course, make those decisions not independent

of other physical and financial demands on the state budget. Of course we cannot spend all of our money on education, but we do spend over 50 percent of the general fund budget on education. So there is a substantial commitment to education in the state of Montana. The university system comes before us as well as the public schools, and I sense a great deal of competition, especially in the university system, for students and for dollars. Yet in all the presentations that we get from the university system, not once have I heard one of the units say, "I am competing to be the best teaching unit in the state of Montana." I think that is important. I think sometimes our emphasis is wrong.

Another critical point in Montana is that I sense some backlash in communities about administrative salaries, and I sense resentment on the part of extended growth policies. I think this has a negative impact on education.

I do see a greater effort in communication between the secondary schools and the university system. And I see greater communication between local school districts and the community at large. I think a lot of our problems can be solved by communication.

I can't help but think of an old song that says, "It only takes a spark to get a fire going." I think we have the spark. Let's start the fire.

Argenbright:

In Montana we pride ourselves on our common-sense approach, and I would like to say that in Montana things are happening. We have over 550 school districts spread over the tremendously varied landscape that we call Montana. The school occupies a very special place in each of the communities, and not all of the needs are the same. There is diversity, and the excellence that we are going to achieve is going to happen at the local level.

In visiting the schools around the state, I did not find one school where I would not enroll my own youngsters. We have to convince the public that we have high standards. My own Montana Task Force on Excellence that preceded *A Nation at Risk* dealt not just with seat time, but also with curricular expectations. In fact, we dealt with the skills that youngsters should have when they get out of high school. We are currently going to build on the Montana rural education project, which did some curricular work at the elementary level. We are going to extend that into the high school curricular area, and we are going to tie those curriculum expectations in with student expectations. I believe that is a move in the right direction.

I would say that the Board of Public Education in Montana is doing some very significant things that nobody knows about. I believe they are making a difference. As you know, the Board of Public Education has the authority to certify teachers in Montana. On the basis of that authority, the Board is looking into the teacher training programs at the college level. These reviews are including local people, local educators, administrators, people from my staff, and other college people who are looking at those programs to see if there are ways of improving them. This is a cooperative venture, and I believe it is a move in the right direction; what happens in the classroom is the

key, and we have to have excellent teachers in the classroom. The Board of Public Education is currently considering the pupil instruction-related days. The Board is concerned with continuous professional development needs for teachers and administrators.

Some of the things going on in Montana are worth your being aware of. I will quickly go over them. At the end of this week Kalispell is hosting the National Conference on Equity. We are concerned about equity issues, whether they be issues relating to women, minorities, the disadvantaged, or whomever. We sent a team to Princeton to learn about opportunities in math and science for the disadvantaged and women; the team included elementary teachers, college teachers, high school teachers, and people from my staff.

We also are cooperating with various farm groups in the state. Although nationwide less than 4 percent of the population is directly engaged in agriculture, in Montana the figure is 9 percent, a much more significant number of people. We are trying to target in on fourth grade curriculum so that when youngsters are working on math, they are working on a math problem that can be related to agriculture. I think this is important for our state.

I also would like to talk about the drug and alcohol problem in Montana. It is a problem that we in the schools have finally come to realize that we can't handle by ourselves. We have set up a cooperative effort through which the sheriff, ministers, the PTA, teachers, and many diverse community groups get together to handle those kinds of problems. I believe we are making progress.

Talking about partnerships, business-community relationships, communication between the community and the schools, and similar kinds of things, in Bozeman this week over 250 youngsters participated in a program called "Business Week." In that program, youngsters and teachers are being exposed to the principles of private enterprise. Business leaders from around the state are working with the kids, and business people are finding that young people have capabilities they never dreamed they had.

I am particularly pleased with the reaction of Montana teachers and students to the renovation of the Statue of Liberty project. Our kids and teachers have really been enthused about that, and we are using it as a means of inserting some patriotism into the classroom and Montana.

We are concerned in Montana, and we feel that we have to maintain our traditional strong commitment to education, to the schools, and to all that they represent in their communities. We recognize that democracy requires an educated citizenry.

Hart:

Twenty-nine years ago there was a White House Conference on Education. We were concerned at that time about the oncoming hordes of kids who had been born following World War II.

What were we going to do about the tremendous number of children who were then going into kindergarten and into grade school? How were we going to get enough teachers? How were we going to structure our programs? How were we going to get enough classrooms? How

were we going to pay for education? Meetings were held all over the United States, and a meeting was held in Washington, DC, which went on for four or five days with 1,800 participants. They labored and labored and produced many platitudes perhaps, but high hopes. What we all talked about so much at that conference, both in Montana and in all the other states, was just getting all the kids through grade school and then through high school. We felt that if they could read and write and communicate, they might be able to get jobs and hold them. That was our aim and that was our hope. Looking at education twenty-nine years later, I think we failed. I think that's the report that we just got from Dr. Crosby on *A Nation at Risk:* generally we failed.

Everybody in this room failed. The whole United States failed. That's what this is all about. We are indeed a nation at risk. I couldn't agree more with what the report says. And I've been concerned about education as long as any of you here, as an avocation, perhaps, and as a result of having served on quite a few college boards and with other programs.

The report says that this is probably the only generation that can look back and say that our present crop of kids came out having studied less, knowing less, and being less well-trained than the generation before it. That's a real critique, a damaging statement. I happen to agree with it.

We are a nation at risk in the international situation. I was in Japan in 1966. At that time the Japanese were teaching children arithmetic when they were four years old. They were starting to teach them English in kindergarten and in the first grade. If you read the report, you will see that while we put in about 1,000 or 1,100 hours in our school system and are open 180 days, England is talking about going from 1,500 hours to 1,600 or 1,700 hours.

Some people say education is in trouble because the divorce rate has gone up, because of drug and alcohol abuse, and for other reasons. That could be an indictment of the older generation who twenty-nine years ago thought we were doing something about such problems, just as we hopefully today are going to do something about them. Frankly, we didn't do a very good job. Of course, some will say, "Addressing such issues isn't the job of the schools." I thought the job of the schools was to prepare people for living. Not just to **make** a living, but **for** living. If all the adjustment classes offered in our schools are considered a preparation for life, then we haven't done a good job. Today's parents are the kids whom we were trying to get through school then. So don't sit back and say it isn't the job of the schools. Everybody says it is the job of the family. Well, who trained the family? Just think about that. And the children we are training today are the families of tomorrow.

Sometimes we who have had a great deal of experience in education as an avocation may see it more clearly than the people who are making a living in the field. I challenge you to take a realistic look at that report. It's pretty near right.

Jones:

After reading the *A Nation at Risk* report, I found the open letter to the American people potentially useful as a catalyst for positive and constructive change. I have to emphasize the word "potential," because this potential has not been realized. In fact, the real content of this report has been ignored at best, and often has been distorted and perverted to fit the purposes of expedient politicians.

A case in point. In a section of the report entitled "Hope and Frustration," I found a very interesting paragraph. It says, "On a broader scale, we sense that this undertone of frustration has significant political implications, for it cuts across ages, generations, races, and political and economic groups. We have come to understand that the public will demand that educational and political leaders act forcefully and effectively on these issues. Indeed, such demands have already appeared and could well become a unifying national preoccupation. This unity, however, can be achieved only if we avoid the unproductive tendency of some to search for scapegoats among the victims, such as the beleaguered teachers."

Yet the primary emphasis that I have heard from the national leadership regarding this report is on that all-encompassing panacea of merit pay, which is only alluded to in the *A Nation at Risk* report in subsection 2 of Recommendation D, "Teaching." That recommendation reads: "Salaries for the teaching profession should be increased and should be professionally competitive, market-sensitive, and performance-based. Salary, promotion, tenure, and retention decisions should be tied to an effective evaluation system that includes peer review so that the superior teachers can be rewarded, average ones encouraged, and poor ones either improved or terminated."

This emphasis on the merit pay issue as the primary recommendation of the *A Nation at Risk* report does one thing and one thing only: It accuses the teachers of being the problem. Teachers are the scapegoat. I have noticed a glaring lack of emphasis on one aspect of this report, Recommendation E, "Leadership and Fiscal Support." There are two particular subsections in this recommendation that I found most significant. Subsection 2 says that "State and local officials, including school board members, governors, and legislators, have **the primary responsibility** for financing and governing the schools, and should incorporate the reforms we propose in their educational policies and fiscal planning."

Subsection 5 says, "The Federal Government has **the primary responsibility** to identify the national interest in education. It should also help fund and support efforts to protect and promote that interest. It must provide the national leadership to ensure that the Nation's public and private resources are marshaled to address the issues discussed in this report."

What do we find happening as a result of the *A Nation at Risk* report? At the local level, we are finding mill levies and bond issues being systematically turned down. At the state level, what are we finding? Our governor has, in the last biennium, suggested a zero-

zero increase for the state's Foundation Program, which provides funding for Montana schools. Strong rumors have it that his next recommendation will equal his last. I have heard that he is suggesting that until there is a public outcry for better, quality education, he is going to continue to promote zero-zero increases. This is hardly meeting the recommendations of *A Nation at Risk*. What do we find at the national level? We find a President who started out with a platform for education that included prayer in schools and tuition tax credits. He has now expanded that platform to include merit pay and discipline. I believe that he has failed to read the content of the *A Nation of Risk* report.

At one time teachers could say that even if they were not paid enough, at least they were respected members of the community. The misuses of this report have robbed teachers of that last consolation. It has robbed them of respect from the community, and worst of all, it has denied them their self-respect. Within three years there will be a shortage of qualified teachers unless corrective action is taken. There are declining enrollments in teacher education institutions, and we are seeing a declining quality of people trying to be admitted into teacher training institutions. Who in his right mind would enter a profession that neither pays nor affords them any respect for having entered the field?

My concerns are not with the content of the report, which I agree with, but with its abuses and its misuses. Too many people have, at best, read only the parts of the report that are in italics.

I have two questions for Dr. Crosby. First, do you feel that the Reagan administration, the Congress, and state and local leadership are making a sincere effort to address the full report, with all of its implications? Second, do you feel that the nation is willing and ready to assume the fiscal responsibility for the good quality of education that this report recommends?

Crosby:

The report, by and large, when it came out, was not accepted. It probably went through some changes while we were working on it. We had some complications in getting the report out until finally the Commission decided that if we did not present it as we wanted to present it, we would not present a report at all. I think that we ourselves were surprised at the reaction of public. I would have to say the report became political immediately. I think it took the White House by surprise. No one expected the response it received. I think the White House suddenly decided it had to catch up with what was taking place.

Once it decided that, I don't think it was ready to deal with the content of the report, and so there were some side issues. The first one you mentioned — merit pay. We did not deal with merit pay, but performance-based pay for people who are doing those things that are extra. Coaches and band directors get pay for doing something extra, but frequently teachers who are doing an outstanding job don't even get letters of commendation. But the next day, the country was talking about merit pay, blaming the teachers for whatever was

happening. That was not part of our report. I think that by and large nationally we have not gotten the kind of leadership necessary to support the kind of changes taking place.

To address your second question, it is amazing that education has to end up most of the time going to the public for its support. That is one reason we said that citizens must demand that elected officials support education. No matter what happens, we are going to pay for education, but we have to determine at what level. We have to recognize that we cannot allow one side of the street to have everything and provide everything for its kids, and right across the street have a situation where nothing can be provided. All children are citizens. That's why we are saying that we have to look at the state level to make sure the districts are somewhat equalized and that nationally we must make sure that the states are equalized. We have to realize that the local district may be ever so willing, but survival becomes the first law of nature. I think all indications are that the public is willing to support education, but we also have to understand that sometimes they may consider they are committing economic suicide if they do, so we have to look to the higher level. I think the public is willing, but in some instances cannot afford it.

Dayton:

It seems to me that the report has perhaps invited or sown the seeds of its own misuse because it has created the unreal expectation that with a few simple solutions, everything will be taken care of. I quote from the top of page 15: "If the tasks we set forth are initiated now and our recommendations are fully realized over the next several years, we can expect reform of our Nation's schools, colleges, and universities."

I think anyone involved in education knows that you don't achieve perfection. In fact, if you think you have, that's probably a pretty clear indication that you don't understand what is going on. There is no single, easy solution, and grabbing hold of one thing or the other offered by different advocates won't solve everything. Simplistic solutions won't solve very difficult and complicated problems.

Hart:

Dr. Crosby said earlier that the reason the report was so simplified was in the hopes of getting the extremely well-educated American public to read it. It is interesting that newspaper circulation in Japan is going up and that newspaper circulation and readership in the United States is going down. I wonder how much of this is due to good, succinct commentators who give us capsulized information on television. It seems to me that when this report was presented in such a way that maybe some of our illustrious college graduates might deign to read it or even teachers might read it, that, in itself, is an indictment of what we have been doing for the last twenty-nine years. I think it is interesting that a great percentage of the news that is now more-or-less digested by the American public comes orally and not through reading. That also shows quite a lot about what we have done for the last twenty-five or thirty years.

Rye:

What you have alluded to reminds me of something that disturbs me, and I think should disturb all of you. Whenever I visit an elementary school class, the children are always enamored of me as someone they see on television. That apparently gives me a special status; people pretty much ignored me when I was doing something else for a living. In that kind of situation I tell almost everyone that to really understand the world and to understand even the news of the day, there is simply no substitute for reading. Television news is marvelous in its ability to communicate emotions of the moment, and in its ability to pictorialize the news in ways which newspapers aren't capable of doing. But to really have an understanding of your world, there is simply no substitute for reading. What bothers me is that when I say that, the students almost invariably look disappointed, as if they were hoping that what I do can somehow be a suitable substitute for what they have to do in school. They are failing to see the relevance between what they are doing and what their lives are going to be comprised of later. I think if we can somehow instill a love of reading as the basic fundamental of education, everything else will follow, because you cannot do a thing in school unless you can read and understand through reading.

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Selected Questions from the Audience

Question:

While one out of every eighteen male-headed households in this country is in poverty, one out of every three female-headed households is so affected. The National Advisory Council on Economic Opportunity says that, at present rates, by the year 2000 the poor will be made up entirely of women and their children; it refers to this phenomenon as the feminization of poverty. Do you see any area in the United States where this problem is being effectively addressed?

Crosby:

I know of no city or state that is really addressing that problem. I think that is part of the issue that we need to be looking at nationally. We are keeping our head in the sand and hoping that the danger is going to go away. If it is growing, we are going to have to, at some point, decide that we must intervene in the system. When we were talking earlier about the single-parent family, we were talking about day-care centers, kindergartens, and so forth. It was brought out that the shortage of child-care facilities is such a critical problem that young couples, when the female is pregnant with the first child, are already seeking day-care centers. The country is not ready to address that issue. It looks like private industry might have to come along and start establishing a national franchise for day-care centers.

A statement was made yesterday that we cannot compare ourselves with other countries because they take their elite or their high-achieving youngsters and invest in them heavily. I want to be one of the first ones to say that we don't even invest in our high-achieving and elite youngsters. In other countries, high-achieving students get the top choice of universities. If the parents can't pay for their education, the costs are taken care of. We don't do that. We have a different kind of government; we expect more of our people to be involved in the social policies of this country, so we have to take a whole different attitude.

We keep talking about average, and what states are doing, and what our communities are doing. We've got to start looking beyond that in terms of where the competition is and what is out there. Right now we have the problem of single-parent families, we have the problem of high unemployment, we have all kinds of problems, and they are not going to go away. They are increasing, and if we don't do something about them, they are going to increase even more.

Question:

Can public education be all things to all people? In other words, what is the purpose of our schools?

Crosby:

I don't think it can be all things to all people. We cannot do everything. Just because the schools are there does not mean we must impose all sorts of activities upon them. We function to teach the kids to read, to write, to understand and respect others in other cultures, and so forth. There is no reason that we need to be involved with checking for immunization, registering voters, and a lot of other kinds of things. I am not denying that they are important. But we have to start recognizing we cannot dump everything in our society that needs to be done onto the schools and still expect them to keep doing the kinds of things that they used to.

Twenty-five years ago, we didn't have all the things that the schools now have to be involved in. We do have them now because our society is not willing or ready to put up the funds to get other agencies to do the job, so the other agencies are just refusing to do them and are dumping them back on the schools. I think that some of our protectors, whether they are boards of education or legislatures, have got to protect the schools from all of the special interest groups that want us to do everything for them.

Question:

If the thrust of education is in grades K-8, why were there no representatives of these grades on this Commission, and were these people ignored by design?

Crosby:

That question has come up several times. When the Secretary was asked why not have either an elementary teacher or an elementary principal — somebody representing the elementary constituency — on the Commission, the answer that came back was that the report by and large was making the country aware of all of the other reports that were out. And at that point, all the other reports were dealing with secondary education. Everybody was trying to blame secondary education for whatever the problems happened to be. Once we got started, by the way, we recognized how critical elementary education was. In fact, it is most critical and is our number-one academic institution. If we neglect the elementary grades then we can forget about all the other levels completely.

Question:

If an answer doesn't come quickly and easily to students, it causes them problems. Do you have any thoughts on how to deal with this frustration of students not being able to handle confusion and ambiguity?

Crosby:

I think that we have trained our kids for this. Throughout society, it is pretty much the same thing. Don't wait for something; buy now, pay later. On television, the most complicated problems can be resolved in a half an hour. Somehow or another, we have all gotten caught up in it. Even in our teaching, we have gotten caught up. We don't give any more essay questions. They take too long to answer.

You just check off yes, no, one of the four, none of these, or whatever. I don't think we even leave "none of these" because that might involve thinking. So students check one of the four. As a result, our kids have gotten geared to not wanting to wait for certain kinds of things. They picked up the pattern from us, whatever it happens to be. I think we're going to have to spend more time, especially in the earlier grades, to let them know that when we have a problem or a question we need to take time to resolve it.

Our kids are smart. They are exceptionally smart, and they learn very quickly. Our kids learned that we awarded scholarships based upon grade point average, and that we didn't even look to see what subjects the grades were in. So they started taking classes like driver education, home economics, and physical education, and getting A's in them, because they knew they could get a scholarship with those grades. Those kids are smart enough to recognize that four years at $5,000 or $6,000 a year is worth a lot more than nothing for having C's and D's. They started taking easier classes. As soon as we stopped the requirements of foreign language and advanced math for entry, they dropped them, too. They learn from us, and they learn fast. If we don't expect and demand that they put more time and money working for the right answers or the right process, then they won't.

Question:

What kind of management skills do you utilize to get your parents, students, and teachers involved in a success-oriented program?

Crosby:

The first thing I try in my schools is to set a tone. I get a lot of credit, but the credit really belongs pretty much to my staff. We try to have written expectations and demands. I try to hold teachers to what they have written. When my staff members have suggestions and ideas, I listen to them. If an idea sounds practical — and sometimes even if it doesn't sound practical — I let them try it so they at least feel that I am supporting them.

We place high demands on our students, especially in terms of behavior and everything we try to do in the classroom. I really support the teachers who do that, and I ride the others who don't. I inspect classrooms. I visit classrooms to the hilt. I don't stay in a class all the way through, but I keep going by, looking in. If I stop in two or three times and I find out a class isn't going too well, then I get my department head to start spending some time in there to check things out. We keep the pressure on all the time.

Another thing is that I do try to praise people who are doing well, students and staff. I set aside a period of time every day in which we make announcements, and if anyone has done anything well in school, whether staff or students, during that time I go over the PA and I praise those people for it. I bought a flag that says, "Northern High School Be Proud Aloud, Northern School the Winner." Whenever someone does something, I fly the flag. That flag is there right under the U.S. flag, and it says Mrs. so-and-so took four kids on a field trip yesterday or whatever. We do the same thing for students. At the end of the year, I send all the teachers a letter

thanking them for allowing me to be a part of their staff.

It's the same thing with parents. When kids are doing well in school, we always try to have activities and invite the parents. It costs me a little bit of money because my staff people who got the idea going said we needed refreshments. If a kid does something fairly outstanding, we invite the parents in. Sometimes we invite them, we give every kid a carnation, and they give them to the parents when they arrive. You have a certain kind of support once you start doing that.

I meet a lot with the kids. I spend a lot of time with them. No kid in the last seven or eight years has graduated from high school without my having had lunch with him or her and talking about their future plans and what they have been doing the last four or five years. I always go into the English classroom to talk with new students about what I expect of them while they're in high school.

Once you start that, they get a sense that you are interested in their welfare. You do the same thing with staff and it takes off; it doesn't take that much time once you do it because then you can kind of forget about it. But if you don't do it, then you always have to wrestle with it.

Question:

What kind of discipline do you use in your school?

Crosby:

I guess the greatest thing in terms of discipline is trying to be fair and consistent. Consistency is the most important. The kids can accept anything harsh and severe as long as you are consistent and you expect the same thing from everybody. That is the one thing that we try to stress. If we set up rules and regulations, we are going to carry them out. No matter who you are, whether you are an A student or an F student, we are going to stick with it. Once that permeates the building, then things work fairly well.

Because we do not believe in corporal punishment, spanking kids, and so forth, we are generally involved with exclusion, which is one or two days out. Depending upon the nature of the problem, I almost always demand a parent conference. I try to reduce the amount of time out because most of the time the offenses relate to the kid cutting classes. If he is already out, why legitimize it? Sometimes with the parents, I kind of threaten that I am going to make the kid work in the lunchroom or make him help the janitors involved with keeping graffiti off the halls or something of that sort. But by and large our major punishment in Detroit is exclusion from school. I try as much as possible to use the parents to deal with the kid.

I have mentioned the expectations of and demands upon kids. I know people frequently say that increasing graduation requirements will force kids out, make them drop out. If we give our kids a good elementary education, good preschool, and Head Start, they will set standards far beyond whatever we will set in high school, and we won't have to worry about losing them. The kids that I lose cannot read, cannot write, cannot do math. They have gotten to high school and they can't do the work.

Fourth General Session

What Are the Global Stakes? and Instructional Technology and Educational Reform

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What Are the Global Stakes?

Francis N. Hamblin
Former Chairman
AACTE Commission on
International Relations

Introduction: The Global Context

I would like to speculate on why the two topics, global stakes and technology, were linked together in today's program. I suspect the reason is that explosive advances in technology have resulted in an explosive expansion of our global stakes. For example, primitive man, many thousands of years ago, rose in the morning and put on his loincloth or his bear skin, seized his ax and club, and went out to spend the day hunting food for his family. He cared not one whit for what happened 5,000 miles away, which he couldn't comprehend, or 500 miles away, which he couldn't comprehend either, or probably even 50 miles away, or maybe even 5 miles away. As long as there wasn't a forest fire on the other side of the hill or a group of hostile men coming up with clubs, he had no great concern for the remainder of his physical environment.

Today, however, with technology having developed as it has, almost anything happening anywhere on the globe is likely to affect us in

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some way, at least eventually, wherever we reside on the earth. The earth is the most fantastically productive piece of real estate that we know of anywhere in our universe. Some 5 to 10 million species of living things have developed and can be found in various parts of this planet, and the question today is, how do we keep the earth the most productive piece of real estate in our universe?

Today we approach the subject of the global stakes of American education. Webster's dictionary defines a "stake" as "that which is placed at hazard." In the at least nine major reports on American education that have been issued during the past year and a half, relatively little has been said on the topic of global stakes, with the exception of occasional comments that our school year is notably shorter than is the case in Japan or Denmark, which is true; that our curricula are regrettably light on nonwestern cultures, which is also true; that on a recent test 40 percent of U.S. twelfth graders could not place Egypt on a map, which may or may not be true; and that in the last decade there has been at all levels in this nation's educational system an alarming decline in the study of foreign languages and international issues, which is clearly true. One reporter noted with particular umbrage the tale that when a Soviet soldier allegedly sought asylum in the American embassy in Afghanistan, there was no one in the entire embassy who could understand what the soldier wanted to do. So let us consider several aspects of the possible global stakes of American education, with the thought and hope firmly in mind that Socrates was quite right in his oft-stated insistence that an awareness of the existence of a problem is half of its solution. Very few problems not known to exist are likely to be solved.

In a little-known book of philosophy from the Far East, a proverb is quoted: "All faith is false, all faith is true. True is the shattered mirror strewn in myriad bits while each believes his little bit, the whole to own." When we try to examine institutions and cultures not native to us, we must beware, as the major blind spots which we cannot clearly and instantly recognize are most likely to be our own. May I remind you of the classic joke about the two priests who always disagreed with each other; they argued and argued. Finally one of them said to the other, "Yes, yes, we are each doing God's work, you in your way, I in His." Any of us trying mightily to understand peoples or facts or social arrangements not our own can never remind ourselves too frequently that such a commendable effort may often prove to be as vain and as frustrating as trying to catch firmly in hand a wisp of smoke drifting gently on a summer breeze. We are likely to have, in fact usually do have, mere conjuries of impressions, suspicions, hopes, and bits of objective matter randomly gathered, all of which we try with some hope to filter through the near limitless collection of subjective prejudices existing in our own minds. The congenital subjectivity of the American perception of the outside world seems to be a very old one, but it continues to churn up such new phrases as, for example, "the evil empire." While this characterization of the Soviet Union may or may not be true, it certainly is not very

conducive to developing further diplomatic discussions on arms control or anything else.

We now seem to agree rather generally that education is in reality a lifelong and seamless process from cradle to grave, the purpose of which is to assist all individuals to develop themselves to their highest potential for the good both of themselves and of their society. As we peer about us we do in fact suspect that ignorance, rather than evil, is man's most persistent human enemy. Perhaps they are one and the same. The arch-enemy of ignorance, as we all know, is the individual and social process known as education. Adding further both to the complexity of our problems, as well as to our justifiable hopes for discovering viable solutions, is the rightly touted explosion of knowledge currently taking place in the world. For example, the U.S. National Institute of Health recently estimated that more medical research is now being done in a single day than was completed in the entire nineteenth century. Little more need be said about our knowledge explosion. Thus in terms of usable knowledge, we increasingly realize that, in the words of a philosopher-scientist, we have picked up but a few pebbles from the shores of a vast ocean that remains to be explored. Putting it otherwise, we do not yet know enough, thank heavens, to be pessimistic. We in fact still know so little of all that is to be known that it's possible for us justifiably to be optimistic. In any case, being optimistic is much more hopeful, much more exciting, much more constructive, and, to use a term that is out of fashion in education, it's much more fun.

A recent publication on the university and world affairs concluded that our age has been characterized as the first in history to recognize the practical possibility of having all the people throughout the world share in the fruits of civilization. At such a time, the report concluded, education has been catapulted into the position of a major determinant of the dynamics of social change. Human welfare everywhere depends upon the conjunction of technological power and democratic freedoms. Without the first, it said, people are slaves to nature. Without the second, they are slaves to one another. Neither liberty is possible without education. But as only about a third of 1 percent of human history has elapsed since the development of the first alphabet in ancient Egypt, and as only approximately 200 human generations have passed since the beginnings of recorded history in ancient Egypt, it seems unlikely that we should presume to be historically at the point of discovering any panacea for human difficulties, or solutions to all our ancient puzzles.

We really know all too little about the nature of this marvelous process known as education, sometimes defined as being like the concept of pi, in that it never ends and it never repeats itself. Even the quality of such education as we have is essentially nonmeasurable by any standard method of quantification or description. The entire process of education is most mysterious, and its larger goals highly abstract. We educators really don't know what precisely we are trying to measure, or how to go about doing it, or whether we have even remotely succeeded, or even whether success is possible. Indeed, the

quality and the substance of an educational institution, it was once said, is no more scrutable than that of a new wife or a second-hand car. Most urgently do we need more fully to utilize the total educational potential already in existence and to use it with energy and imagination, without letting ourselves be hampered unduly by the traditional hamstringing considerations of political boundaries, results of standard examinations, the fifty-minute instruction period, or who happens to own which building. In today's complex world, a cooperative effort is likely to produce the most successful outcomes, while being at the same time consistent with the pluralism of educational interests in a democratic society, and in the larger world itself.

As we review the remarkable history of economic, social, and educational development in our own country, we are impressed by the truths espoused by our well-educated founding fathers, that the key to a nation's success is the adequacy of its efforts to educate its children. It would certainly appear that education not only creates desires for a higher way of living and a higher way of life, but that it can also show us how to obtain these objectives.

Indeed, the basic rule of institutionalized education in human society is clearly indicated by the consideration of one of the essential differences between mankind and the so-called lesser animals with whom we share our planet. Man strives to change his environment to meet his particular needs, whereas other forms of life, in the course of evolution, eventually either become extinct or adapt themselves successfully to the environment in which by happenstance they were placed, often by mankind. Doubtless since Adam was created, and certainly with some degree of organization during at least the last 6,000 years, a few leaders and thinkers have been using their brains and their imaginations to seek a better understanding of nature, people, the world in which we live, and the universe about us. But not until probably 300 years ago or so did these thinkers and experimenters begin to realize that nature is neither wholly mysterious nor somewhat haphazard. Nature generally operates in regular ways in accordance with what we have learned to call "natural laws," leading Albert Einstein to conclude that the most incomprehensible thing about this world is that it is comprehensible.

The discovery of these natural laws was regarded as the province of science with their application to the improvement of our material welfare, hopes, supramaterial welfare. This was termed technology. As we survey the vast areas of resources, both natural and human, at the theoretical level, it all too quickly becomes apparent that it is our mental or intellectual resources rather than our material resources that establish the limits to which we may aspire.

Three Major Global Problems: Threat of World War III, Overpopulation, and Environmental Decay

Let's consider three of the major difficulties that currently confront all human beings on this planet. We live in what social scientists call an era of maximum transition. Unless the approximately 4.8 billion people currently alive on this small planet can somehow manage the

transition with a fair degree of success, numerous kinds and degrees of disaster threaten to undo us, unless we undo or neutralize them first. The first item I would mention is the threat of World War III, nuclear or otherwise. ("Otherwise" includes germ warfare, chemical warfare, sonic warfare, and any number of other kinds of warfare presently being developed, against which it is somewhat unlikely that a perfect defense could ever be constructed by anybody.) Even nine years ago it was reliably reported that the United States and the Soviet Union, between them, have accumulated enough nuclear explosives to represent the equivalent of 50,000 pounds — 25 tons — of destructive force for every human being on earth. If you multiply that by the population of the world at that time, 4.2 billion, that's quite a lot of destructive power. Ten years ago a single bomb was being stockpiled that contained more explosive power than all the bombs combined that were dropped in Europe in World War II. Ten years ago the total military expenditures of the world's nations ran about $400 billion. A decade later, this year, our Arms Control and Disarmament Agency in Washington, D.C., estimates that all the nations in the world taken together will spend approximately $1 trillion on military preparations. Both the United States and the Soviet Union stockpile a minimum of 7,000 nuclear warheads apiece, more than enough to destroy the entire world many times over. Yet we read that disarmament talks are suspended indefinitely, although that may be loosening up a bit.

Today governments of the world elect to spend in total more funds on the military, whose function is to kill others when judged necessary, than they do on education, which is concerned with the development of our greatest natural resource, the abilities of our citizens. At a congressional subcommittee hearing held on the U.S. Information Agency's budget a while ago, one of the people testifying said there are four main channels of foreign affairs: diplomacy, trade, communications, and force. The first three are complementary, the fourth is an alternative. Today the United States spends 90 percent of the resources it devotes to foreign affairs through the fourth channel and only 5 percent through the other three. The witness concluded by asking, "Isn't it about time to start changing that ratio?" This hearing took place in 1968. Now, in mid-1984, it may be appropriate to repeat that question: Isn't it about time to start changing the ratio?

Another global problem is the threat of massive world overpopulation, the reverse of the nuclear war threat, which could, if it materialized, resolve very quickly the overpopulation problem permanently. Between the end of World War II and today, world population has more than doubled to nearly 4.8 billion, and it's expected to reach 6 billion a mere sixteen years hence. Throughout much of the Third World, where three-quarters of the world's people live, poverty is rampant, malnutrition is ripe, medical care is, according to the best reports we can get, declining, illiteracy is endemic, and there are great social distortions which provoke riots, strife, and small wars of various kinds. There are many weakened governments and there are many signs of gathering chaos. Today, for example, almost all of the world's land which is economical to

cultivate — some 3.6 billion acres — is already being used, and per capita agricultural production is beginning to slip. Yet nearly 100 million people — the population of Bangladesh, for example — are being added to the world each year. We might also note that each year something like 58,000 square miles of more-or-less cultivatable land is being returned to desert, which is to say it is no longer cultivatable because of man's abuse of various kinds.

That leads me to the next global issue, the threat of environmental decay. To a degree virtually unforeseen, our human race is threatening the whole life-supporting basis of our planet, all species including our own, by the massive polluting of our land, our air, and our water. Factory wastes of numberless kinds, engine exhaust fumes, sewage, and household trash in this country amount to about five pounds per American citizen per day. Our spreading enterprises, which have brought about the felling of an alarming proportion of the world's forests and other negative factors, continue to best all our far too meager efforts to control them.

People have managed in a very few centuries — largely, in fact, in the past few decades of explosive overuse, abuse, and misuse of our natural resources — to upset the delicate self-adjusting balances of our thin biosphere which nature spent some eons developing and refining. As someone put it, the worst things in life are also free. Were we to continue as at present, we could well convert our green and productive earth into another sterile and lifeless moon on which most or all of the ingredients necessary to sustain life would be missing — and, of course, we would be missing too.

Yet despair is out of the question. We're not obliged to let these horrors develop further. All of them can either be reversed or vitiated, can we but cooperatively design high-priority international strategies to cope with these dangers. International communication can become the basis for a rational discourse about the destiny of our common world. For example, arms control could without insurmountable difficulty be hammered out. As George Conrad noted in a recent issue of *The Atlantic Monthly*, "If we were to consider carefully, as a student of contemporary history might, what concrete conflicts of interest divide the Soviet and American peoples today, we would be surprised at how few these actually are. And if we were to count the opportunities for mutually beneficial cooperation between the two, if they suspended their ideological wars, we would be surprised at how many there are."

All aspects of the military, population, and environmental crises could be coordinated in a world program. Other matters such as birth control, food and energy production, health, and education, could also be included. I think an awareness of the urgencies of these three major problems, together with foresight, leadership, and organization, can reduce them to a level of managability. For the practical purpose of doing business, a very long list of corporations operates today on the premise that this is one world, politics, color, and customs notwithstanding. Despite unfortunate international tensions at the moment, governments seem slowly to be arriving at the same

conclusions. A French politician recently said, "It's clear that the nations are too small to handle the environment by themselves. The problem is bigger than any of us."

This appears to be equally true with respect to most of the great maladjustments with which human society must now cope, as well as with a near-endless list of similar difficulties. We need more fresh water, for example, as world consumption is doubling each twenty-one years. Even the exploitation of table-grade fish worldwide is not at its estimated sustainable yield, which in simplest terms means that, in theory, anyway, this yield can never be much greater than it is. In sum, our largest human or global problem seems to be that our current unlimited rate of growth, dependent as it is on limited resources, is resulting in something popularly called pollution. We are outgrowing our physical resources and overreaching their immutable laws.

What Can We Do, and What Is the Role of Education?

What can we do? Lots of things. At the level of greatest generality, we can use our brains to develop our education, and use our education to develop our brains. As with the science of physical ecology, which is essentially nothing more than a systems approach to nature, we need to develop a functional human ecology to build a systems approach to mankind and his values, leading to the conceptual development of a human ecosystem, a balanced cycle, a counterpart to nature, in which nothing is wasted and everything (or almost everything) counts. As a former U.S. Secretary of State noted, "Neither ideas nor science nor technology, nor anything that fosters the spiritual and material progress of man, can be considered as having a value circumscribed by geographic or ideological boundaries."

As we consider all these things, at least two summary generalizations appear as legitimate. First, man's lack of understanding of his fellow man continues to flourish vigorously, as it has throughout history. Second, our present continuing tribal conflicts cannot be sustained for much longer in the hostile environment of our slowly decaying biosphere.

Whatever happens at any point on the globe – riots in India or airstrikes in the Persian Gulf – we must increasingly and rightly regard as representing a natural extension of our interests. This is a long-range, intensely practical, intensely idealistic concern. Also, we cannot believe that events within our own boundaries escape the notice and interest of the rest of the world. We must view the world in terms of unities rather than mere political units and recognize the interdependence of all nature and of all people. The compelling realization of mankind's common heritage, of his common stake in the well-being of his fellow man, must somehow be brought home to all, with education necessarily and inescapably playing a paramount role.

What can or should American education be doing to assist in a major way these various efforts? In terms of stimulating educational

institutions at all levels to greater activity in the global arena, at least five major subareas of effort have proved especially helpful.

1. The fuller utilization of the growing number of students from other countries who elect to study in our schools and colleges and universities.
2. The development of international linkages in such areas as technical assistance through the U.S. Department of State, the Agency for International Development, and literally hundreds of other organizations.
3. The development of language and area-studies research centers, so that we will know more than we now do.
4. The establishment of programs of international education exchanges for students, faculty, and staff members.
5. The sponsorship of an astounding variety of experimental ventures to globalize our curricula.

Each of these five kinds of efforts tends to support the others, once they are built into an institution's goals and structures. Once started, they should be institutionalized as soon as possible, lest they weaken and die when the administration changes or when the external support funds dry up. The greatest problem with getting grants and contracts is that whatever you do with them, and no matter how well you do with them, they usually cease functioning altogether when somebody forgets to send a check from Washington or elsewhere.

I'm going to say nothing more about the first three recommendations — foreign students, international linkages, and language and area studies. With respect to the fourth, programs of international educational exchange for students and staff, may I note that the opportunity to spend one month, four months, or a year in a school abroad will for most people prove to be an astonishingly invigorating experience. It can be refreshing mentally as well as having a profound long-term effect on a participant's acuity of perception both at home and abroad. In the case of faculty and staff exchanges, it is often little short of amazing to notice how many improvements in instruction and operation may come to pass in the sponsoring institutions themselves. Indeed, international exchange has proven most effective as a faculty development project. When such exchanges are established on a mutual, long-range, self-funding basis, which can involve the exchange of sizable groups from either side, they usually prove to be a highly cost-effective and learning-effective segment of an institution's academic program. Student teaching abroad, which has developed very rapidly during the past few years, has certainly been one of the outstanding examples of this, but exchanging all sorts of things in addition to people — libraries, dance teams, and art — has also been beneficial. The International Council for Teaching in Washington, D.C., or virtually any national or state professional association, can provide suggestions, leads, contracts, models, and other assistance for developing exchange programs. At best, an effective exchange will help each participant to know more not only about another culture but also about his own culture and himself. This, in the finest and truest sense, is self-renewal, both

personal and professional.

Now to the subject of curriculum, which is really the core of the matter. At a conference on the international responsibilities of higher education, held a couple of months ago in California, the Vice Chairman of Atlantic Richfield stated that despite the emergence of a global economy, America continues to reflect a very isolationist view in elementary, secondary, and higher education. He quoted from Mr. Boyer's study, High School: "Today's high school curriculum barely reflects the global view. The world has shrunk, yet American young people remain shockingly ignorant about our own heritage and about the heritage of other nations. Students cannot identify world leaders or the capitals of other countries at a time when the destinies of all nations are interlocked."

In an earlier report, *Quest for Common Learning,* Dr. Boyer stressed the need for revival of common learning to revitalize educational experience by emphasizing the shared values, shared responsibilities, shared heritage, and a shared world vision centered on the interconnectedness of everything. The oneness of life reflects the common ideal of virtually all the world's great religions in the brotherhood of man. At a practical, operational level, the role of education and international policy is implicit in the statement made by an outspoken friend of education, President Lyndon B. Johnson, in his address to the Congress eighteen years ago on the International Education Act of 1966. He said, "The conduct of our foreign policy will advance no faster than the curriculum in our classrooms." This, incidentally, is an area in which returned exchange teachers can be most helpful by picking up even one good idea when they're abroad. For example, a couple of our exchange teachers were deeply enthused about early childhood teacher training in England and brought back what they thought were the best points of it; they entirely changed the early childhood teacher training program in our institution.

Until this point in history, the development of educational systems and their curricula has been almost entirely the history of particular national cultures developed by nation-states. But for some thirty years there has been a steady strengthening of experimental efforts to employ a cross-cultural or polycultural approach to curriculum construction in many subject areas, based largely on the belief that mankind, despite its many appearances, is essentially one. Modern anthropology tells us that any given human being is a product of three identifiable factors: biological heredity, physical environment, and social heredity or social culture. In terms of the first of these factors, biological heredity, it is the consensus of anthropologists today that more than 95 percent of the biological equipment of any human being anywhere in the world is shared with all other human beings, including members of races popularly considered to be the most different from one's own. There is, of course, a tremendous range of individual variations, but these crosscut local, regional, and continental types. The four major blood types, for example, are found throughout the world in about the same proportions in all races and stocks. And through many centuries of wars, migrations, and

invasions, the human race has become remarkably homogeneous in the biological sense. We're all heroes or we're all bums. It's been estimated that by laws of chance or through genealogical records, anybody in this country whose ancestry is, say, one-half European could be proven to be a direct lineal descendant of that giant of the eighth century, the Emperor Charlemagne. The homogeneity of mankind is a generally accepted fact, although it's not commonly stressed in most courses in biology.

With recent advances in technology — in clothing, transportation, and even air conditioning — mankind has much reduced the differentiating effects of climate. It's startling to reflect, given the genesis of AIDS, the continent-crossing capabilities of acid rain, to say nothing about our greater understanding of world weather, that the physical environment is presently more shared than it has ever been before, in both pleasant and unpleasant ways.

The key factor really is social heredity or social culture, which may be defined as a way of behaving, thinking, feeling, and believing; this is a social legacy inculcated in each of us by our elders, schools, associates, and institutions. Much of our education, as we all know, comes from outside the school, but we hope that much of it also comes from within it. Social culture is the tailoring which, contrary to the biological stuff of life, can be and is like all tailoring, constantly being altered, with or without good reason or effect. Social culture is, in short, that part of our total environment which is the creation of mankind. We do it. Quite surprisingly, people in all cultures everywhere in the world seem to want pretty much the same things from life. Everyone likes eating, drinking, companionship, affection, basic freedom from political insecurity, peace, and a reasonable amount of economic security, although their ways of attempting to provide for these wants may and do differ. Obviously, much more research is needed on the common needs and interests of mankind. Many more experimental ventures need to be launched because this is a field to which we haven't given too much thought. We haven't developed nearly enough materials, and we haven't put them into usable form for the classroom. Few teachers or their superiors truly understand that our culture is not an island, and that we Americans do in fact stand as equals among equals in a world in which there are many cultures undergirded by a common foundation of humanity. Yesterday's suggestion of somehow putting into the curriculum an emphasis on the 165 common human treasures of mankind was an excellent one.

At every level today the world has new perspectives of freedom: freedom of resources, freedom of manuever, and above all, in the words of Barbara Ward, "a certain freedom of heart that springs from beginning to see the world not as a nest of enemies and traitors, but as a human community in which we must labor effectively to unfreeze the vast, literally limitless, human potential by trying to solve the world's problems on a humanwide basis." Nationalism has lost much of its nineteenth-century romance and glamor. The astigmatism caused by purely national desires and outlooks must and can be

monitored and corrected by the development of educational systems that stress the elements common to all mankind, while concurrently reducing the traditional and troglodytic emphasis on particular tribal or national aberrancies. Putting it more simply, the world is in fact slowly becoming more and more a local community.

Some decades ago, Britain was frequently referred to as "the tight little island." In this closing portion of the twentieth century, for reasons that have been advanced in this speech, it seems not inappropriate to refer to this earth as "a tight little planet." This conference dealing with the critical examination of American education has given us an opportunity to refresh our perspectives insofar as our global stakes and education are concerned. These stakes, while literally grand, **can** be managed and **will** be managed, I believe, for the most compelling reason imaginable, and that is that they **must** be managed. Perhaps a sentence from the last speech made by Adlai Stevenson shortly before he died sums up our viewpoint as residents of this world. He said:

> "We travel together, passengers on a little spaceship, dependent upon its vulnerable supplies of air and soil, all committed for our safeties to its security and peace, preserved from annihilation only by the care, the work, and I will say, the love we give our fragile craft."

To do this, the role of education is obviously essential, and the stakes, I think, are reasonably clear.

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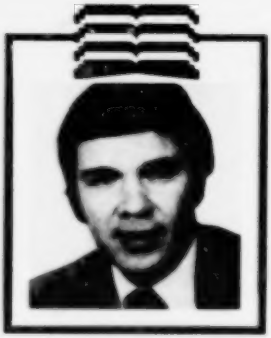
Instructional Technology and Educational Reform

Lyn Gubser
Executive Director
Association for Educational Communications and Technology



Fear of Technology Is Not New

When discussing modern technology with people, I find that there's a great deal of controversy as to what it is and that there seems to be an overriding fear of the entire issue. My first goal is to desensitize you to technology and what it is about, and to point out that fear of technology is hardly new. When Plato was teaching, one of the things he was most concerned about was writing because he feared it would destroy memory. Socrates also spoke out against this nefarious practice because it was anti-intellectual. Writing, said Socrates, will destroy memory, and memory is what links men's minds with their ancestors. We know that because, of course, we read it; and that tells us a little about what occurred as a consequence of writing. Do you realize that we probably have lost something that we probably really don't have memories as good as mankind had at that time. I'm not arguing that we don't give things up with changes in technology. But we do acquire, we hope, more than we give up in that process.

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The development of the printing press triggered our second major fear of technology. People throughout Europe were very concerned that the printing press would vernacularize the language and scholarship, that the common people would begin to share scholarship, that scholarship would thus become common, and that universities and all that was academic would be cheapened. And I suppose that happened. One of the first effects of the printing press was that we quit writing everything in Latin and began to use vulgar languages like French and English and Spanish. And what happened? Latin died. If your Latin teachers were like some I knew when I was a boy, you know the kind of love of the language they had, and you recognize that when we gave up Latin we did give up something that was very important to a lot of people. We're hard-pressed today to say what was important about Latin because, as with memory, we have lost the ability to appreciate some aspects of our earlier culture. But we think we gained in the long run. Most of us would not give up our books, and we would not say that books have detracted from teaching, or that books have replaced teachers, or that books have been, in the main, detrimental to education as it was feared they would be when they first arrived.

My second goal is to expand your understanding of modern technologies. I also want to talk about the potential they have for enabling people to communicate with one another. The new tools I'm going to talk to you about were designed to help effect more efficient and economical transfers of knowledge and the symbols of communication from one individual to another, from one generation to another, and from people who know a subject to people who do not. Each of us is probably on both sides of that equation on certain issues and at certain times. I've broken down the new technologies into seven categories: telecommunications, video, audio, microprocessors, robotics, interactive systems, and one that I call the "far out," because that's what it is.

Telecommunications

Telecommunications, right now, are marked by satellite technologies. It's important to know that satellite technology enables us to beam up a very weak signal, increase its size and power while it's there, and bounce it back down. Satellites are gigantic reflectors; irrespective of their size, they all are powerhouses that pick up tiny signals and increase them to a strength that will enable every one of us to communicate with one another. Do you remember the old Dick Tracy watches that were tiny TV's? All of us thought they were something strictly for the comic strips. It's predicted that within the next five years there won't be a single person in this country who won't be able to have a wrist-sized transmitter and receiver to enable us to be in contact with one another at all times. (Of course, that raises the question about where you put it when you don't want to be found!) Satellites are going to enable communication to be more immediate, more direct, and more widespread. I really believe that twenty years from now people are going to look back at the 1980s not as the "age of the computer," but as the "age of telecommunications." And

satellites are the cornerstone to that. I don't think any of us have any idea what we have wrought with the satellite system, especially in terms of global concerns. Already there are students in Wyoming who are picking up French television and using it in their high school French classes. Even ten years ago people couldn't have believed this was possible. Think of the potential. Many countries in the Third World are now saying, "We don't need to build our own Harvards, Stanfords, and Oxfords. As long as we have satellite transmission capabilities, we can have an MIT class in Lagos, Nigeria." These kinds of things will become increasingly important in bringing schools much closer together.

Let me introduce the term "narrowcasting." The Public Broadcasting System this year announced and launched at the Comtex Convention, sponsored by the Association for Educational Communications and Technology (AECT), its new national narrowcasting system. Nine satellites throughout the United States will be beaming down programs that are regionally oriented, that eventually will be interactive, and that will have potential for both public education K-12 and higher education. A whole range of television receipt capability will be possible, including low-power television, intermediate-frequency television, and many video innovations. Again, the potential for public education is evident. In addition to satellites, of course, cable systems are now bringing closed-circuit television to communities. I recently visited a small town outside Logan, Utah, where I think all but fourteen houses are now linked with cable. The school district has put cable in the homes that couldn't afford it so that every morning it can broadcast continuous instruction, films, and school board news. If the school board has a referendum, the people can dial in responses and questions so that there's immediate feedback as to what's happening. I've never seen cable used more extensively, and to find that going on out in the middle of the Utah sagebrush was quite a surprise.

Optical fiber systems are now being put into New York City, Cleveland, and Cincinnati. Optical fiber systems enable a more direct transmission of all kinds of video without interruptions from other broadcast signals or other sources. I think optical fiber systems are going to replace cable in a lot of communities because they offer greater clarity and because many more signals can be sent at any given time. One of the current problems with video is that the capability of sending so many signals makes it become almost impossible to use all the avenues that are available.

Video

Looking at video in the main, we're now seeing some very exciting technologies develop. Most of you are familiar with video disks. With RCA leaving the field open to Pioneer, laser disks are now going to be very important, particularly for information storage and retrieval. Many libraries are finding that the only effective way of combatting the acid deterioration of books is to convert wanted materials to video disks. Each side of the video disk can store approximately 40,000 pages of information. In short, the entire *Encyclopedia Britannica* can

be put on one side of a disk. And, because of laser technology, if you get peanut butter and jelly all over the disk, it will still work as well twenty years from now as it does now. The stability of the laser disk format is particularly impressive if you have young children who like to gum stuff up. As long as a teacher, a librarian, or a media specialist has a wet washcloth, the system is operable.

New video tape formats are also coming into vogue. I'm not as excited about those as some of my colleagues, but video tape does have the possibility of read-write, while video disks are read-only systems. Read-only means you can only play back from it. You cannot record on a disk any more than you could on an LP record, which you could do yourself only if you had millions of dollars worth of equipment. Video disk is a read-only system, and that is one of its drawbacks. On the other hand, it has a lot to offer in terms of its great amount of storage capacity. Pioneer is now in the process of developing a video disk read-write system that will be, they tell us, within an affordable range for most public school districts.

Holography also offers a tremendous amount of potential. Holographics, if you'll recall, are three-dimensional images that are like 3-D without the glasses, except better, because they don't distort the image at all. Right now about three companies nationwide are developing holographics. The AECT is in the process of reviewing a contract with the Smithsonian to begin the holographic recording of its entire collection. An area as large as a 35 mm. slide will store some 600 holographs. Think about what that means in terms of storage space. With this technology we can project three-dimensionally whatever is holographed. A holograph is not like a three-dimensional photograph where you get only one three-dimensional image. By changing your position, or by changing the holograph's position, you can actually see all three sides of a given object. This is one of the most incredible technologies developed to date for museums, art, and the fine arts. It's taken a long time to achieve effective projection.

Three-dimensional television is now around the corner. You see three-dimensional television without glasses. It is not holographic; various technologies have been brought together to produce it. It's being used to teach certain principles of solid geometry and drafting, and it's very useful in biology for getting perspectives from various angles on moving and live material.

Three-dimensional motion pictures are coming into their own. For those of you who've been to the Epcot Center and have seen the Kodak demonstration of three-dimensional motion pictures, I think you'll agree that this medium is hardly dead, even though it is more conventional than some of the things we're talking about.

Large-screen television promises to help fill the gap that will be left by the loss of our collections of instructional motion pictures, which are rapidly dissolving before our eyes. The present rate of replacement of educational media, particularly instructional films, is thirty years, although the average life expectancy of an educational film is ten years. Need I say more? We are losing our media collections

in most of our public schools — losing literally millions of feet of film and tens of thousands of dollars a day. The Los Angeles public schools recently had 6,000 projectors and 60,000 titles of educational films put into a vault because they do not have the money either to maintain the equipment or to replace and maintain the film. It's a real tragedy that after we worked so hard to build up media and film collections, we cannot afford to maintain them. We're putting so much money now into salary and other maintenance areas that something has to go, and what is going nationally has tended to be our traditional media, including specialty film. What that portends for people in schools and in media is that we're going to be relying more and more on large-screen projection of video tape, which means videotaping a lot of our films before they totally disintegrate. One problem with that is that the technology of large screens is not what it ought to be, in large part because American television broadcasts in many fewer lines than does European or Japanese television. U.S. large projectors have not kept pace. Therefore we don't have the clarity of projection that you would if you were in, say, Tokyo.

Audio

When I say that audio is a new technology, many people ask, "What's new about audio?" Let me introduce you to a new technology in audio that I think may have greater impact on you personally than many of the other things I have talked about — voice compacting. Voice compacting comes about by taking a digital recording of, say, a speaker reading *Moby Dick*. Out of that recording, a voice compactor takes out one-half of the silent spaces between words and one-quarter of the sound from each subsequent word, and compacts all that together. Listening to these compacted tapes, you begin getting hearing rates that are approximately commensurate with reading rates, so you can listen to *Moby Dick* being read at about the same rate of speed that you would read it to yourself. A lot of children are finding that they can hear a lot better at faster rates than they can read. Recording classics, or turning out best-sellers in compacted versions to play on cassettes in the car may become a whole new industry. Imagine doing a book a week driving back and forth from work, even if you only have a twenty-minute commute. A lot of people are saying that voice compacting may offer a way to get kids to wear Walkmans and do their homework while they're playing soccer, or to let us do a lot more versatile things than we've ever done before. I'm excited about this media. I've seen it demonstrated, and I probably am more optimistic about its chances of being lasting and having a major impact on public education than many of the other technologies.

Microprocessors

I want to talk a little about microprocessors, lest it be said that I don't think computers are important to education. I think they're important, and I think they are going to become increasingly important; I just think that presently they're overrated. I don't think that the quality of software has kept up with the hardware. I think that they offer some major opportunities for a lot of students and not

such major ones for others. Research shows us that students who are above average in academic ability and intelligence who use computers do better, and students who are below average do better, but the middle two-thirds who are average do no better with computer instruction, and sometimes they do worse. I think that those of us who've taught can understand why that is. It makes sense that computers, as instructors, are limited in what they can do. Yet I don't think that some of the knocks they're taking are justified. For example, a lot of the criticism right now is that software is all drill and practice. It's been my experience that most instruction in schools is drill and practice. That's one of the problems with American education. One of the reasons that software is drill and practice is because that's what schools order, because that's what teachers want, because that's what teachers use. (And I think that's OK too, because it's nice to have a machine take over some of the drudgery of teaching.)

I think that computers have been clearly demonstrated to have capabilities of teaching problem-solving and teaching in creative areas, but that of course is dependent upon the software. And unless we as educators demand that kind of quality of software, we're not going to get it. Right now we're getting what we're paying for, and we can talk all we want to about wanting more creativity and wanting more synthesis, but if all we do is buy software that teaches kids to type, which is not a bad thing for computers to do, by the way, we're going to get more of the same.

Incidentally, I really do believe that you cannot generalize a computer application to all areas of the curriculum. For instance, I know there are important aspects of business and office management that can't be computerized. But when it comes to teaching kids to type, using a computer is probably a good idea. IBM's typing software is perfectly content to sit there and take 2,000 years to teach a kid to type! And if a child is retarded, it may not take 2,000 years, but it may take a lot longer than any human being has ever wanted to spend to teach him.

I was in a school in Chicago when I had an experience that again made me conclude that computer-assisted instruction was really worthwhile. I saw a child with Down's syndrome, mongolism, who typed his name and then typed, "Miss Sanders I love you." (She was his teacher.) The teacher told me that the child had been judged trainable but not educable, and would never write, would never be able to do anything in the way of language ever. Yet he was computer literate enough to be able to communicate something very important. If we spent all those millions of dollars and those billions of person-hours developing software for no purpose other than to teach a child with Down's syndrome how to write his name and a simple message, I think it was worth it.

There are some other things that are particularly important about computers that I don't think we've utilized enough. I'm going to give you a commercial right now. We at AECT started an electronic mail and bulletin board service called Technet. It is sufficiently popular now that the American Association of State College and University

Presidents, of which this college is a member, has now voted to consider a resolution to link every major college in the United States on this networking system. Its function is to keep people abreast of the very latest in various technologies, to enable people to find out what is happening in a given area, where they can find it, and who the contact people are. Our organization, incidentally, represents not only individual members, but also several corporations. Some you might find peculiar, like Arthur Anderson, the accounting corporation, until I tell you that it has an $85 million training budget. Its training budget happens to be larger than the budget of American University in Washington, D.C., and I think a lot of other colleges and universities do not have budgets that large. Arthur Anderson is linked in with this system, as is Disney Telecommunications. If you ask what Donald Duck can offer colleges and universities, let me tell you, a lot. Now we're picking up a lot of public schools, including those in Denver, Atlanta, and San Francisco. For less than $20 a month a person at, say, Disney Telecommunications, can sit down at a personal computer with a telephone link and contact someone on this campus and ask, "Do you have any knowledge about this?," or "What's your opinion on this kind of a product?" We're beginning to see a lot more rapid and, I think, more prioritized communication among diverse groups within our population, all concerned with education.

One of our problems in this "information age" is the production of information that nobody wants. When people tell me that this or that device will give me more information, in the back of my mind I think of what my mailbox or my in-box looked like the last time I saw it, and I think I need more information like I need the plague. No, I don't need more information. I need a way of screening through the chaff and getting the wheat. I need to have someone help me by saying, "This is important, read it right now," or "If you have time before 5 read this — otherwise forget it," or "This isn't worth taking the time to read. You'd be better off to put your feet up and think about something creative." That's the kind of system that we're trying to develop. We're trying to create the ability to screen through a mass of information and to give people, through an electronic networking system, some kind of control over the information coming out of it.

Robotics

When I start talking about robotics, I know that a lot of people assume I'm talking about things that look sort of like mechanical men and walk around. Robots, in case you don't know, are machines that perform human fuctions. That may mean no more than welding a bead on an overhead shaft, thus replacing somebody who's been doing that for fourteen or twenty-five years with a machine that won't get sick, go on strike, or demand Blue Cross/Blue Shield. But you end up with attendant labor problems that were foreseen very clearly by Karl Marx when he began looking at automation as one of the engines that would drive his revolution. Well, there is a revolution afoot. It hasn't hit Montana yet to the degree that it has hit elsewhere.

Michigan has been hit hard because that is where the automobile industry is located, and that is where robotics made their earliest mark. But robotics will impact on all of us, more than anyone, I think, has really expected. One of the surprises about the robotics revolution is the speed with which it's hit. The things that we expected to happen twenty years from now are happening today.

Let's talk about current needs: 14 million people a year need to be retrained for robot industries. Yet currently we have absolutely no national labor policy on training. There was a 200-person office in Washington, D.C., that did nothing but look at these kinds of data and say, these are the kinds of policies the federal government needs to be moving into — areas where there are great dislocations. Two months ago, however, the Reagan administration abolished the entire office. It's like we were driving down a winding river road at night and Reagan reached over and turned out the lights! We can't see where we are going. The AECT is doing its very best to try to get that wing of the Department of Labor reinstated. There are lots of places within the federal bureaucracy that we would gladly see cut, but that is not one of them. That is a very important office in terms of training.

Incidentally, let me tell you how training is impacting on public education. In Michigan, when it came to retraining, the corporations and the federal government asked, "Who's in charge of education here?" And where do you suppose the burden of retraining is falling, but on the already overburdened public schools! For example, in a three-county area, Buick has just incorporated all the elementary schools that had been closed because of declining enrollments, and is turning them into robotics retraining centers. That's going to happen in industry after industry across the land. It's not something we're projecting, it's something that is already happening. Training is education, and it's something that's going to be added, I think, to an already overcrowded agenda.

Interactive Systems

I'll speak for a moment about interactive systems. You'll find that interactive systems are particularly important in terms of what they can do to replace some of the things we've lost in recent demographic moves and changes. Many of you probably have heard of an "interactive video disk," which is a personal computer linked with a video disk. I'll give an example of the kind of thing it enables you to do, that it enabled me to do. I sat down before a product called "Biodisk," and when it said, "Please give your name," I typed it in. Then it said, "Good morning, Lyn. Today we're going to dissect a cat." All of a sudden, right there on the screen appeared the carcass of a cat. At first it was a cartoon caricature, and then it dissolved into the real thing. The machine said, "Now we are going to be looking at the respiratory system. Take a stylus and on the screen make your incision." I noticed, contrary to my old zoology days, that I didn't smell any formaldehyde. I knew that to clean up the lab all I had to do was press the off button, so part of my concern about cat dissection was

already taken care of. I took a stylus and drew it down, and the machine went black and said, "No, no, no, no. You either did not read the lesson (which I hadn't), or you did not understand. Let's go back and review what you're supposed to do." So it flashed back, told me exactly what to do, and then said, "Now, let's try it again." So I did, and this time it gave me all kinds of praise and said, "Very good, Lyn! That's wonderful! Now, show us where you would spread the carcass to expose the lungs and respiratory system according to what you learned in that lesson." And I did, and it gave me some more praise, and it said, "That's great, wonderful! You are taking too long to respond to the answers though; would you please hurry up."

Will it surprise you if I tell you the National School Boards Association is now seeking funds from the National Science Foundation to develop an entire interactive video system to simulate chemistry and physics labs? The average chemistry and physics lab in the American high school today costs over $1 million to construct and equip. That will buy enough video disk and personal computer units to equip any student who wants to use them. I know you are going to ask what I did: "Isn't there something to be said for hands-on experience in the laboratory?" Yes, but what about hands-on experience in designing a nuclear reactor, which physics hardware has already been produced to do? I wouldn't want anybody doing that in my classroom. I had some students who I think were perfectly capable of doing that, and I had others who were perfectly capable of touching it off. I think we begin to see that we can use this kind of technology to improve our science programs and operate them more economically than in the past.

A wide variety of other interactive systems are in existence. I'll give you just a couple of examples. There are interactive video tape systems; currently we are seeing software broadcasts by radio and television. One thing to watch is a system just invented at the University of Toronto. All FM stations broadcast out of a left speaker and a right speaker. They divide the music like your home stereo will do and send out two signals. Did you ever wonder what happens to the signal that's wasted in the middle, between your right speaker and your left speaker? I didn't, but some people in Toronto did. They discovered that there's enough space for six other programs to be broadcast to receivers to carry all kinds of educational programming, to broadcast software, or to broadcast directly to your Apple Computer at home. It receives and actually broadcasts software that your computer then can run on. The potential of that kind of system is really incredible. It also offers promise for an issue that has been heatedly debated on Capitol Hill this year, an issue that is relevant on every college campus in this country: Who's going to get control of the university and college signals? This invention waives that issue, because wherever there's an FM station, there's a signal that nobody's using.

Teledon is a system in Canada that has begun to broadcast software that is so sophisticated that if you have a personal computer to receive

it, you can get graphics the likes of which are truly photographic and at speeds that now approximate television. We suspect that within the next ten to twenty years, radios will be broadcasting visual effects that are not even reproducible through conventional television systems.

The "Far Out"

Let me turn now to the "far out" technologies. Right now at the Massachusetts Institute of Technology, as you probably know, a group of people is working on artificial intelligence. There are predictions that within the next five, ten, fifteen, or twenty years, either the Japanese or the Americans are going to come out with a machine that can think — a computer that can learn, that can teach itself, and that has what some say pass for emotions. I think it's something that all educators need to watch for, and watch closely. Learning about artificial intelligence will probably tell us more about ourselves than it will about the new computer.

Some other things are occurring that are less popular than artificial intelligence, but in the long run they are probably going to be very important. I don't know how society is going to adjust to these things. The first has to do with learning-pharmacology — drugs that help you learn, that improve your learning efficiency, and that help you retain what you've learned. They're coming out of research like what's being done at Johns Hopkins University, dealing with recombinant DNA. Basically there are drugs that chemically alter your body so that it has the best advantage to retain information and to do things that it might not otherwise do. Clearly, this raises some ethical issues. People start thinking about LSD helping artists see better, and they begin to foresee all kinds of problems connected with pharmacological adjustments. Yet obviously we use drugs every day, whether they're aspirin or coffee, which are acceptable drugs; or alcohol, which is sort of acceptable; or pot which is acceptable to certain age groups; or cocaine, which is becoming less socially acceptable. There are socially acceptable drugs and there are socially unacceptable drugs. Research has found drugs that do enhance learning, but we aren't sure what other by-products they generate. At this point in time, no one is advocating giving kids pills that make them learn and do a more effective job during the time they are at school. No one is suggesting that any of these drugs be tried on human subjects as yet. But some day each of us, especially those of us who are parents, is going to have to deal with the issue of memory-enhancing drugs.

The Changing Demographics of Education

Let me close by pointing out some demographics that I think don't need much more comment. At this conference you've been listening to people talk about crises in education, yet the one thing that my experiences at the National Council for Accreditation of Teacher Education and my observations over the last few years would suggest is that we really haven't underscored what I think is the worst crisis of all: the lack of people to run our schools. One of the by-products of affirmative action has been that women have left teaching in

droves. For some sixty years, our schools survived on the exploitation of competent women. As someone once said, "A funny thing happened on our way to affirmative action. We lost our best teachers." Like Dr. Boyer, I'm not particularly fond of test scores. But if you look at the scores of students entering teaching, you'll find that the scores of men have stayed roughly the same over the last twenty years, while the scores of women have plummeted.

The average scores are down, but the scores of women are down because a lot of women who once would have gone into teaching are pursuing other professions. When my mother graduated from high school in 1929, there were three things she could be — a housewife, a teacher, or a nurse. She wanted to be a veterinarian because she'd been raised on a ranch in eastern Oregon and had delivered literally thousands of head of cattle. But in 1929 there wasn't a single university in this country that would accept a woman into veterinary science; that was a man's field. This year, two generations later, my daughter graduates from high school, and if she wants to go into veterinary science she has about sixteen programs as options available to her. My mother went into teaching because she couldn't be a veterinarian. And she taught for thirty-five years. This last Christmas I was looking through some of the Christmas cards she'd received from students she'd had over the years, and I said to her, "Really, Mom, I know that teaching wasn't your first choice, but there certainly were benefits. Aren't you grateful for those thirty-five years?" And she smiled and said, "Hell no, I wanted to be a veterinarian!"

And now women are veterinarians, and in addition to being nurses they are doctors, and in addition to being bank tellers they are bank presidents.

Let me give you some data. In California, 50 percent of the teachers will retire within eight years. Right now, there is a call out in California for 16,000 science teachers. The University of California system last year graduated four physics teachers and twenty-one chemistry teachers to fill 16,000 positions. In Maryland, the state superintendent has requested a 25 percent pay increase each year for the next two years for the state's teaching force, at an approximate cost of $150 to $190 million per year to replace retiring teachers. In my home town, Alexandria, Virginia, teachers' salaries start at $17,000. The average salary is $34,000. We have a crisis like you'll not believe in finding people to teach in Alexandria because of the high cost of living. Also, it's nearly impossible to get people to return to teaching after they've worked in jobs of wider breadth and scope than they had before.

This is a problem that money will not solve. Canadians are experiencing the same thing. I was recently in Europe and met with the inspectorates of six West European countries, and all reported the same thing. This is not a problem indigenous to the United States. Although money is not the only answer to the problem of a lack of personnel in the schools, it's certainly way ahead of whatever is in second place. We all know that, but I don't want to give the impression

that if we throw all our money at this problem of a lack of personnel we will automatically solve it. We won't. There are some bright spots, however. There are, indeed, many places where women are returning to more "helping" occupations, feeling that as long as they know they can go into higher-paying occupations they are content to work in more service-oriented fields like teaching and nursing.

Technology and Education: Three Hypotheses About the Future

Let me suggest three hypotheses. The first is that technology takes over the schools. I think that's very doubtful. For one thing, in our large cities, unions are especially concerned about the impact of computers and other technologies that are going to replace teachers in the classrooms. Also, numerous articles have been written about the need to be on guard lest schools begin using technology instead of human beings. I think that most of us would agree that new technologies are just like books; they become tools in the hands of competent teachers. They may enable competent teachers to have a broader impact. They may be able to impart knowledge in mass (lecture) while the teachers spend their time with smaller groups or on individual problems. I think there are some sound reasons for educational mistrust of technologies, but at the same time I think there is reason for optimism about the use of others. I do not expect technologies to take over schools.

The second hypothesis is that homes become learning centers and that much that has been done in the schools will be done in homes instead. I suspect that's not probable either, for several reasons — because of the large number of working mothers, the need for school as a socializing institution, and, frankly, the number of homes without electronic capability. There were projections that 3.5 million homes would have personal computers last year, 11 million this year, and 11 million more next year. It's not going to happen. The curve is starting to peak out a little earlier than a lot of people in the industry thought it would. I suspect that ten years from now a lot of homes still will not be computerized, although Bell Telephone may change that because telephones may become miniature computers themselves.

The third hypothesis is that the future is going to be a real mixture of the conventional, the traditional, and the new, and I expect that is what will happen. I see more private academies growing up around technology. That's already occurring in California, where you find a lot of people pulling their children out of schools and putting them into high-tech-oriented private academies designed to prepare students for life in Silicon Valley.

Home education is becoming more popular, as you probably have read. The Boston Board of Education recently passed a measure that allows certified teachers to keep their children at home and teach them using whatever methods they care to use. Missouri just passed a statewide measure to do the same. As long as a person is state-certified, he or she can conduct school not only for his own kids, but

for any children of school age; that has spawned a lot of cottage industries in St. Louis and the surrounding environs, where former teachers now have set up miniature schools based in large part upon personal computers and mountains of software.

I think rural schools are going to become increasingly satellite-linked and satellite-based. I really suspect that a lot of schools in places like Montana are going to be as high-tech-oriented as, or maybe even more so than, a lot of urban schools. There will be an increasing improvement of the home software market, and that's already coming into play. Much better and more sophisticated learning materials will be coming out in the computer industry.

Corporations are taking a lot more responsibility for education and training. One of the outgrowths of the robotics movement has been that companies like Buick have found that before they can retrain, they have to do a lot of remedial education. That has spurred many corporations to undertake some basic educational activities that they weren't doing before. In Japan, as you probably know, a considerable amount of education has been taken over by corporations, and as we adopt more Japanese-type management systems, I expect that we're going to find a lot of corporate activity in lifelong learning ventures.

All I can say for certain is that things will never be the same again. I'm not sure what's going to happen beyond that. I would encourage you not to confine your thinking to single types of technologies like computers, but to look very carefully at the opportunities and possibilities afforded by some of the others. Most important, I urge you not to be frightened by these technologies any more than you would be by the technology of printing. They're all opportunities. They're not threats, they're possibilities. Some of them will work, and some of them won't. If we think about technology that way, I think we'll find that the world can be a lot better place in which to live and learn.

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Panel of Reactors

Moderator: Bud Iwen, United Press International, Montana Manager, Helena

Panelists: Carrol Krause, Deputy Commissioner for Academic Affairs, Montana University System, Helena

Lyn Whitmer, Teacher, Lockwood, Montana

Leonard Kaplan, Professor of Education, Wayne State University, Detroit, Michigan

Cal Winslow, Montana State Representative, Billings

Jeanne Eder, Coordinator, Native American Studies, Eastern Montana College

Svein Oksenholt, Professor of Germanic Languages and Literatures, Eastern Montana College

Kathie Kirkpatrick, Assistant Principal, Lewis and Clark Junior High School, Billings

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Iwen:

Dr. Gubser, you talked about a lot of wonderful tools that can be used in the classroom and can facilitate learning for youngsters. How far away are we from having them for use in the classroom?

Gubser:

I tried to talk about those things that are here and now, so most of what I mentioned — with the exception of memory-enhancing drugs — are either marketable or being marketed or soon will be. In fact, I left out a couple of things that I'll talk about now since you asked the question. In September Atari is coming out with a headband device that will enable you to operate Atari games just by thinking about where your spaceship goes and shoots. I don't know quite how that relates to education, but I'm sure we'll figure out a way. It is too bad that we have to depend on arcade games to apply the new technologies to education. In effect, education is one of the last areas in our society to reap the benefits of these innovations. They occur first in arcades, then in factories, and then in education. Most of the things I talked about, however, are imminent.

Krause:

Industry is not only buying robotics, but is also providing training

so that in fact robots can be used on the assembly line. Have you seen any evidence at all that people in education are willing to train our teachers to use this technology?

Gubser:

Not to the degree that we'd like. I think that AECT, which is the only organization that in-services the profession, is a barometer of that. Our Comtex Show, which is put on with the National Audiovisual Association (which represents the commercial end of media), has grown from some 7,000 attendees in 1983, to 12,000 in 1984, to a predicted 13,000 people in January 1985. Approximately half of them will be sent by their school districts to find out what's going on in technology, and the other half will be sent by higher education and industrial trainers. We hold about 400 sessions, at least half of which are oriented toward preparing people to use new technologies such as interactive video disks and holographs. The conference is growing and is one of the biggest conventions around, but if you think about the potential and how many people ought to be there, it's such an infinitesimal drop in the bucket that I don't think it's having the impact that it ought to.

Whitmer:

I am a classroom teacher. We have purchased computers for our school, and obviously the biggest problem is always money. Do you perceive that any of the computer technological companies are going to give in to education so that we can promote the education for them to pick up on after kids get out of school?

Gubser:

All I can see in my crystal ball on that subject is static. The vagaries and the arrogance of the computer industry right now are very distressing to me. There are some companies that are really terrific. But for most of the hardware companies right now it's a seller's market, and they are less than public conscious, especially when it comes to public education. They're getting rich, and that's the way they like it. Now you have to remember that for every one of them that's happy, two or three others have gone under, so it is a vicious business. Right now I don't see any computer companies giving away computers like we thought they might.

Kaplan:

I teach at a college, and I worry about the level of instruction. I worry about whether we value instruction at all, and whether we value kids at the university. I gave a lecture when I was in the Middle East, and afterwards a professor of chemistry told me that she thought I was spoiling my students. I asked her why she thought that, and her comment was, "Because I think you've got the role of professor mixed up. Professors tell, students receive." I quarrel with that. I quarrel with that anywhere, whether it be in the Middle East, in Detroit, or in Billings. I think that together we have a responsibility for learning. Those of us who teach, I think, have a responsibility to assist our learners learn. And those who learn, I think, have a

responsibility to help those of us who are involved in the educational process teach. By the way, I wish we would stop talking about college professors and teachers. I think that's a terrible dichotomy.

About ten years ago a good friend of mine, Ira Gordon, and I were the recipients of the Golden Fleece Award from Senator Proxmire. I take great pride in that. We received the award because we were working with parents to try to get them to work intellectually with their kids. I think as educators we have a responsibility to get all people to participate in the education of kids. I'm concerned that everybody's business turns out to be nobody's business. That if you talk to a teacher he'll say, "It's not my job, it's your child." Or if you talk to a parent he'll say, "Well, my responsibility is this, this, and this; what are you going to do?" I'm reminded of a story written by President Myers of the University of Pennsylvania, who received a terrible letter from a woman saying, "Look what you've turned my daughter into after six months at the University of Pennsylvania." His response was, "Madam, if you couldn't do something in eighteen years, what do you want from me?" This problem is not the university's responsibility. Everybody has a responsibility, but when it comes to who is going to get credit, we all do; when it comes to who's going to get the blame, it becomes the parents' idiot, the parents' responsibility. I would think that the education of youngsters in our culture is a responsibility we must all share. I'm disappointed that educators, whether they be in schools or universities or wherever they happen to be, do not recognize that all of us should participate; that we have a responsibility of working with the public in getting them to recognize that they indeed have talents and they can be contacted at times other than when budgets need to be passed!

I'm truly concerned that this kind of conference will not go on next year because it's not an election year, that *A Nation at Risk* and many of the other reports seem to be, from some points of view, political and do not truly address the issues. I think education has always been the key issue. I think we've been at risk for years and years, and look how smart we all turned out. I don't say that facetiously; I think there are some clever people here. As I pointed out, I take great pride in my profession. I hope you do too. I think of our nation as at risk from my vantage point, and certainly that's all it is, my view. I think we're at risk because those of us in our profession do not value what it is we do to the degree that I think we should, and because of that, I think other people do not value what we do. We value education, but we do not value the educator, and I think if we could learn anything from other cultures it's that. We must value the process and value the educator. When someone in another country calls you a teacher, he means it with great respect. I bring that message to you from other cultures, and I certainly bring that message to you from parents who think that if there's any salvation for the kids, we're it.

Winslow:

I see a potential problem. We've had ethnic barriers in education for a number of years. Are we now going to start to see barriers

develop because some homes are equipped for children to learn how to effectively use computers? If that is the case, how are we going to motivate these children to go back into what oftentimes in our educational system is the old, mundane system where we're all supposed to learn the same thing? I'm wondering if we are going to start seeing another group of children who are going to be bored to death and set back. How are we going to take a high-tech industry and all the exciting innovations, some of which may even be in kids' own homes, and then still get students back into the classroom and motivate them, when it is not going to be possible economically for schools to keep up with the growth of technology?

Gubser:

One of the things that we've really been thumping a drum about around the country has been the whole business of "computer illiteracy" as opposed to "computer literacy" because we see this as a developing problem of some magnitude.

Eder:

I am a Sioux Indian from the Fort Peck Reservation in Montana, and as the year 2000 approaches, Native American people will have undergone 500 years of "civilization." For many years reports have been issued on their educational inadequacies — the Merriam Report of the 1920s, the Kennedy Report, and now *A Nation at Risk*. As I look at, and try to assess, some of the difficulties that I see in the classroom, one of the main problems for the Native American student is cross-cultural communication. How can we solve the problem of cross-cultural communication either in a technological sense or a philosophical sense?

Gubser:

I worked with the Navajo tribe in 1973 to get a satellite launched over the southwestern United States that would enable the broadcasting of educational programs to the Navajo nation. We got $7 million appropriated to put up the satellite, and then Congress in their wisdom took away the $1/2 million for receiver sets for the tribe so that they could receive signals from it. This kind of crazy problem is always going to arise, but we're closer to solving the technical problems than we've ever been. Now we have to establish two-way, and I emphasize two-way, communication with those formerly isolated cultures. I really am encouraged about that as much as I am anything that I see in the new technologies.

Oksenholt:

Mr. Gubser, is there a machine, is there a computer on the market that can translate a communication from English into academic German, or Russian, or whatever language, or does there need to be a human in between?

Gubser:

The whole business of language-to-language translation is a problem that has confounded computer programmers. Curiously enough, programmers have come closest with Scandinavian languages because

they're more phonetic in terms of pronunciation and spelling than, say, English, which has words like "pneumonia," and three different "two's," and all kinds of things that really foul up either voice-to-machine-synthesization or simply translations of written into printed word. You find idiomatic expressions in most languages that really confound a program. Most of the companies I've talked with say that we're at least ten years away from any usable translation device as you describe.

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Selected Questions from the Audience

Question:

I would like to ask a question of every politician who is here, and of those who aren't here. Why is it that education is the only thing in America that money doesn't help? That's true not only for Republicans but for Democrats too. I also want you to tell me how teachers can be inspired when they have to moonlight, and how they can inspire others to learn when they have to worry about paying their bills.

Winslow:

I don't think I have ever said that money won't help education, and I would think it would be a mistake if other people were saying that. I personally don't agree that money wouldn't help. However, I don't think money is the answer to everything. I think there are a lot of other things that we're dealing with in education — working with personalities of people and other factors that are important in motivation and bringing people up to a certain level of education. I think probably there's as much learning going on in our country right now with people playing Trivial Pursuit as there is sometimes in the schools, because people want to learn. Those things I think are important in education as well.

Unfortunately, our job as legislators — particularly for those of us who sit on the appropriations committee — is to divide up a little pie. We see all the problems out there. Everybody has his own area that he's particularly interested in, and for you it's education. But I know there's only so much money, and no matter what people think, there isn't a pot that will go on forever. I look at the problems that we mentioned today at lunchtime — the increasing number of women on the poverty rolls, Aid for Families with Dependent Children, Medicaid problems, the fact that now we're saying that we've spent 11 percent of our gross national product on health-care so that's it. It's OK to want to start putting on the lid, but then you're also going to start saying no to some people getting care. That's out there. We've also got highways, we've got all these other things, and we try to deal with them. I think for a politician, sometimes our saying that money won't help is our way of saying, without saying it, "I wish I could help you, but I can't." It's our way of trying to get you to back off a little bit, but I think it's incorrect for people to say that money won't help. I think that it would be helpful. Take a young family and look at them trying to survive if one of them is a teacher and the other is trying to raise the children. Moonlighting is an issue, and I think that it may be extremely important that we get salaries up to a level high enough that people can remain in the profession, because we're seeing them leave the profession. My answer to you would not be that money wouldn't help, but that money isn't everything.

Kaplan:

Obviously we as educators need to be far more politically astute than I think we are, because I think professionally, quite frankly, we're benign. I've been a school administrator both at the university and public school level for fifteen years. I would hate to think that we would walk away from a conference such as this thinking that the responsibility lies with legislators who probably spend most of their time trying to figure out how to get reelected. Or with school administrators who have a unique set of problems. Or with parents who have a unique set of problems. I'm not as institutionalized as I used to be; I'm losing more and more confidence in the ability of the organizations that I belong to to solve my problems. I don't think that's going to happen. I'm going to go home and I'm going to do my best. I have a profession that I care a great deal about, and I refuse to let anybody defame me and what I do for a living. I'm going to go home and I'm going to interact with my students. I'm going to fight politicians at the same time, and I'm going to get after my university president, because I think he needs to support professional education far better than he does. Quite frankly, for any of you within the university system, you know it's not part of the reward system. We could care less how well you teach, we care how well you write. I've sat on many committees, and I'm also a writer and researcher. Many of the things we've talked about here, quite frankly, we give lip service to, but we don't value. While we're talking about organizations, I hope that you don't beg your own personal responsibility.

One thing that seems very clear to me is that this is still a democracy and that it is really the voters who decide to a large extent what the priorities are. If we really want better schools or we want better funding, we have to be willing to vote higher taxes for ourselves. And we need to persuade the society and culture as individuals to be active in that.

We here in this room are committed to the idea of resolving the crisis in education that we're talking about. We have to be willing to take action ourselves. For instance, it seems to me that a very simple thing that each of us could do when we leave this conference would be to write a letter to someone — a newspaper editor, a politician, a person of influence — and inform him of some aspect that we're impressed with or we're excited about. We do have the potential to take initiative, each one of us, on some point that we're interested in. If we sit back and simply have conferences and then go home and go back to our classrooms and back to our second and third cars, we will see things continue as they have. We have to be movers and shakers as well as discussers and panelists if this is going to happen.

Question:

My question is related to cross-cultural communication. Whites, our dominant culture, value individual excellence, which was the focus of the *A Nation at Risk* report. I have heard that some other cultures do not value individual excellence. What's important for a person growing up in that culture is to feel that he belongs to the group.

What matters is whether the group succeeds or fails, not whether the individual succeeds or fails. I'm hoping that this illustration is enough to focus my concern that in education that there are very deep value bases that we don't look at very closely. How do children learn the best if we're constantly pitting them as individuals against each other? That violates a basic cultural assumption about how to live in the world. Also, we have an increasing political emphasis on what we sometimes call the far right — fundamentalist religious groups. It seems to me this is also an expression of individuals feeling at a loss. They can't identify with mankind, they can only identify with a fairly small group, and they do not want their children educated away from that small group identity.

Eder:

I don't know that it's true that they don't want them educated away from that identity. It was my grandfather who encouraged me to go to school, and he said that in order to survive, you must have as much of the white man's education as possible. When I listen to other Indian educators talk about the education process, they continually remind teachers/educators that they are educating a 200 percent person. Indian children will be taught their Indian culture by their people, by their ancestors, and by their community. The job of public schools is to teach them how to succeed in the white man's world. When I talk to my students I say, "Do not use the excuse that you are an Indian for not succeeding." If they don't know their cultural values and their cultural backgrounds, I will begin by teaching them that. But the skills that I feel they need to succeed in the white man's world are knowing how to write well, knowing how to produce and compete in the white dominant society. Perhaps this will help with your question. I think that what you're looking at is educating a 200 percent person, so keep that in mind.

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Fifth General Session

Increasing Student Competence — an Emerging Indicator of Educational Excellence and Coming Together for Excellence

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Increasing Student Competence — an Emerging Indicator of Educational Excellence

Lee Noel
Executive Director
The ACT National Center for the Advancement of Educational Practices

The More Students Learn, the More Likely They Are to Persist in Education

Many of you find yourselves in classrooms on a daily basis, others find yourselves in administrative offices managing that environment, trying to make the learning life in your school or on your campus something that will motivate students to learn. It's people — it's teachers, coming face-to-face with students — who make learning come alive. I know most of you are in the classroom and working with students day in and day out, face-to-face, making a difference in the lives of people, and that's exciting.

Please keep in mind that nearly all of my work has been at the post-secondary level. I believe, however, that what our research base says

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about post-secondary education will also apply to secondary and even elementary school. One of the key messages that I want to bring to you today is this: The more students learn, the more they sense that they are finding and developing a talent, the more likely they are to persist in school.

I am excited about another idea. We need to move away from some of the traditional indicators of quality and indicators of excellence and move toward adopting as an indicator increasing the competency base of students. Where are students' competencies when they come to us, and what do we do to cause those competencies to expand, to grow? It's the value-added notion of education.

Oftentimes institutions get excited about retention, about how to reduce the dropout rate, when they feel some kind of an economic pinch or when enrollments are dropping. Many institutions find that reducing the dropout rate is one of the most humane, cost-effective, and educationally sound strategies for maintaining and even increasing the enrollment base of an institution. But in that process keep in mind one thing: There is no quick fix. Tricks of the trade, gimmicks, will not work. What it takes is providing students with a lively, an exciting, a very substantive educational and personal growth experience. Retention is not the goal. Keeping students in school is not the goal. Retention is the result of improved programs and services for students in the classroom and elsewhere in the school. This is a very fundamental kind of concept.

In colleges and universities, if retention were the goal, we'd try to hold students there at all costs. We would do everything short of building 12-foot barbed wire fences around our campuses to lock them in, to trap them. We call that trapping behavior. Now, there are some trapping behaviors that we have noticed from time to time at colleges and universities. Let me give you an example. Beware of faculty who want to work registration. Stacking courses and trapping majors is, I think, a highly unethical and unsound educational practice. In the state of Iowa, where I come from, we call that harvesting, harvesting students for the selfish interests of an individual class or an individual major. Our driving guideline needs to be what is it we can do to improve the learning life on our campus, in our classrooms, and elsewhere on our campus.

At the post-secondary level, we see a shift away from the more traditional indicators of institutional quality. We have some institutions that say they are quality institutions because they will consider for admissions only the top one-half of 1 percent of the high school graduates in America. As a matter of fact, they're attracting such talented students that no matter what they do, or how badly they treat the students, the students are going to succeed in spite of the system in the institution. We're finding excitement in institutions that understand their mission, understand the students whom they're bringing in, and then set in place programs and services designed to increase the competency base, the amount of learning of their students. The value-added notion. That's precisely the concept that we are applauding. We think it has promise because it puts the

indicator where it ought to be, on the outcome of the educational process — on student learning, growth, and development. Perhaps we ought not think of ourselves as schools or campuses; perhaps we ought to be known as centers for human growth and development. Maybe educational institutions ought to be known as centers that are in the talent business: human talent, talent identification, talent development. Isn't that the real function of education? Helping students identify their talent, whether we help them do that in a classroom, a laboratory, on an athletic field, on a debate team, or through some kind of a leadership role. If we can help students begin to find a talent and can help that talent grow by creating an environment where it can grow, that's what I call quality education.

Let me share with you some data on college dropout rates across the nation. The American College Testing Program (ACT) National Center for the Advancement of Educational Practices has, I think, the first comprehensive data bank on college dropouts. We have information on 2,607 two-year and four-year public and private institutions, which represent about 98 percent of all two-year and four-year public and private institutions in America. We have information on the freshman and sophomore years, in other words, the yearly college attrition data. We asked institutions how many of their full-time entering freshmen were no longer enrolled one year later. When we look at the entire sample, we find that one year later about one in three full-time entering college freshmen are no longer enrolled in the college at which they started. The freshman attrition rate is about one in three across the nation. Attrition rates vary rather dramatically by selectivity of institutions. We asked institutions to classify their admissions selectivity. One hundred and five claim to be very highly selective, which means basically that their average ACT scores are 26 or higher. The national average is more like 19 for the total college-bound population. At these highly selective institutions the freshman dropout rate is only 10 percent, and as you go down the scale the freshman dropout rate increases. There is a relationship between academic ability and college persistence. We would expect that. Many institutions working with good average and below-average students, however, are doing a fantastic job of building their talent bank of students. We think emphasis on helping students identify talent, helping students develop those competencies that are going to have value and meaning beyond graduation, beyond the campus, is the key to retaining students.

Computing the Costs and Benefits of Education

I want to apply to education a very simple theory borrowed from private enterprise. It goes like this: Envision students coming to a campus with very finely tuned scales on their heads. On one side of the scale they put costs. On the other side they put benefits. What would go on the cost side? Tuition, books, room, board, other fees, transportation, time, foregone income, effort, sacrifice, blood, sweat, tears, maybe even a little agony. Pretty heavy set of costs. What about the benefit side? We're not quite as spontaneous about that.

Understanding, increased earning power, job entry skills, knowledge for the sake of knowledge. Those are a little hard to sell. How about prestige, status, self-confidence? Let me pass on a tip. We need to spend more time in our institutions discussing, sharing, talking about, brainstorming, developing the rationale and the benefits of education. If we want to convince the general public, the taxpayers, and the legislators that we need more funding, what's one of the best ways to do it? To let them know what it is, more specifically, that we are delivering through the educational process. Of course, we need to make it clear that there are both economic benefits and noneconomic benefits — or what I call quality-of-life skills.

At the post-secondary level, students drop out when education is not a major priority in their lives, when the perceived benefits are light and the felt costs are extraordinarily heavy. To make education a top priority, we need to be sure we're delivering worthy, valuable education that builds into competencies, and then we need to go one step further. We need to change our terminology from "apparent" benefits to "obvious" benefits. The benefits simply are not apparent to most students until we help them understand them. We need to help students in that particular process. Students drop out when other alternatives become more important, when they do not perceive and understand and feel the real value of education, because the costs are very obvious and real and the value and the meaning of that educational experience are not.

Post-secondary education admissions staff feel that they're doing an exceptional job of marketing and recruiting. And they're half right. They're doing an exceptional job of recruiting. There are some tremendously skilled professionals who know how to get applications for admission, how to convert admissions applications or applicants to paid deposits, and paid deposits to enrolled students. But we're not doing a very good job with the basic concept of marketing, and that is helping students identify in advance the outcomes, the changes, or the competencies that they can expect to develop if they'll come and spend one term, two terms, four terms, or sixteen terms on your campus. We need to get more specific about the **outcomes** of education. Then the admissions staff can go the next step and convert those outcomes into more specific benefit statements that connect directly with each individual student.

Measuring Students' Gains in Learning

Our work now documents a very key relationship: The more students learn, the more likely they are to persist. Institutions that are highly productive in fostering student learning are those institutions that also experience higher retention rates. We would have guessed that was true, but we now have documentation for it, and I want to share that with you.

What do we mean by "learning"? What we're really talking about is the degree to which six basic competencies are developed and increased as a result of the educational experience. Eight years ago the Fund for the Improvement of Post-Secondary Education (FIPSE)

gave the American College Testing Program hundreds of thousands of dollars to develop a comprehensive outcome measures program. Part of that challenge was to go around the country and to get some kind of consensus among classroom teachers and other educational leaders on the basic desired outcomes of a post-secondary education. Using a massive sample of people, starting with over 500 goal statements coming from classroom teachers and other educational leaders, staff began to sift and sort, and finally arrived at six basic life competencies, or the basic life-coping skills — communicating, solving problems, clarifying values, functioning within social institutions, using science and technology, and using the arts. FIPSE made it clear, by the way, that they did not want the construction of yet another achievement assessment. They didn't want a measure of how much history or biology a student has stored at a given moment in time. They wanted something more than measurement of rote memory. They wanted an assessment program that would measure a student's ability to apply what has been learned to a variety of roles beyond the campus.

Let's take a look at communicating. FIPSE was rather specific there. They wanted some evidence that students could send and receive information a) in a variety of modes — written, oral, numeric, graphic, and using symbols, b) within a variety of settings — large groups, small groups, and one-to-one, and c) for a variety of purposes. They were looking at some very important basic competencies and the ability to apply what had been learned.

I like what Harold McMillan had to say about the purpose of education, and maybe we're getting pretty close to that. He said that if you work diligently, you should be able to detect when a man is talking rot. That, in my view, is the main, if not the whole purpose of education. Maybe our business is that of de-rotting people by providing them with very basic, generic kinds of competencies. We're talking about life skills, not just preparation for economic gain. The President of the University of Iowa once said that the mission of education is to prepare young men and women not for the first year of their first job, but for the next fifty years of their lives. We think that's what the experts had in mind when they came up with the six basic competency areas.

Some people have described these six competencies as basic career-transferrable skills. We've heard that concept throughout this conference. More and more we are hearing the corporate world saying, "Send us someone who knows how to think, who knows how to communicate, who knows how to problem solve, who knows how to learn." The technical skills of today will be inadequate tomorrow, so employers want people with the generic competencies, people who can update their skills as changes take place in a very rapidly moving high-tech society. Some of you may have had a chance to read Anderson's book entitled *Information Society,* in which he identified some very specific job skills for 1990. Much of what he identified is very similar to the kinds of generic competencies that were identified eight years ago by a massive group of educators around the country.

Recently the University of Minnesota College of Business Administration increased the number of liberal arts courses required for a degree from ten to nineteen. I liked what Dean Lilly had to say about the change — that it made the difference between students being functionally overtrained technically, and learning how to think, to analyze critically, and to adapt to change.

The College Outcome Measures Project Study

Let me share with you the data that underscore the point that the more students learn the more likely they are to persist. In your packet you have a copy of our published report.* I'm going to share the data briefly. In my judgment, this is one of the most exciting pieces of work that has been done. It is really right about what I think we need to do more of in education, and that is measuring results, measuring outcome. It was conducted by Dr. Aubrey Forrest, who headed up the College Outcome Measures Project (COMP) for the past eight years. In this particular study, Dr. Forrest did an in-depth study of forty-four different two-year and four-year institutions around the country. At each of the institutions, he had a measure of where students were on the competencies, both when they entered and left the institution. It's a classic example of a pre- and post-test type of design. He was able to calculate for each of the forty-four campuses an average COMP gain score, or an average so-called learning index. The range of gain scores was 0 to 20. In fact, there was one four-year institution whose students could show no gain in the basic competencies from the point of entry to the point of graduation. How would you like to be paying $5,000 tuition for that per year?

Dr. Forrest put the forty-four individual campus average gain scores in rank order. He took the top twenty-two and called those above-average. Kind of profound, isn't it? The other twenty-two he called below-average. The average gain scores for the twenty-two above-average was 10.4, whereas for the other twenty-two it was 5.9. Keep in mind that a difference of 3.0 is a very, very significant difference. What we have is a tremendous difference between the top twenty-two and the lower twenty-two.

For each of the forty-four institutions — each of the twenty-two top institutions and twenty-two bottom institutions — Forrest had the persistence to graduation rate. He knew what percentage of the entering freshmen had graduated either in three years in the instance of a two-year college, or in five years in the instance of a four-year institution. The institutions that were above-average in terms of what students were learning in the six basic competency areas had a persistence to graduation rate of 58 percent, whereas the institutions that were below-average had a rate of 47 percent. If you've done any work with graduation rates, you know that 11 percentage points is

*_Increasing Student Competence and Persistence: The Best Case for General Education_, A Report of the College Outcome Measures Project (COMP) of The American College Testing Program, by Aubrey Forrest (Iowa City, Iowa: The ACT National Center For the Advancement of Educational Practices, 1982).

a fantastic difference; and even in small schools that means hundreds of students over a four-year period of time, and in larger institutions that means literally thousands of students over a four-year period of time. An important point is that the ACT/SAT test scores were no different for students entering the above-average institutions than they were for the students in the twenty-two below-average schools. In other words, the differences were not a result of the ability of entering students. Other factors were operating that caused students at twenty-two institutions to learn more and consequently persist better than at the other twenty-two.

Six Factors Linked With Student Persistence

I'll talk briefly about the six factors that Dr. Forrest found that were linked with either increased student competency, student learning, and score, or with student persistence. He studied in total fifty factors, and found six that were related to either student learning and/or student persistence.

First, those institutions that saw academic advising as something more than getting students registered into courses, that saw academic advising as a way of helping students better understand themselves, and that had them think through their future, their life, and their career goals in a more thoughtful, systematic way had a better record in terms of student learning as well as student persistence — even though there were no differences in the academic ability level of the students entering those institutions.

A second factor is individualized instruction. Those institutions that have a comprehensive assessment program and a tough-minded course placement policy show gains in student learning and persistence. We all know what happens when you get a fantastic range of talent in a class. Some instructors teach to the top, some teach to the bottom, and most teach to the mean, in which case they tend to miss both ends.

Third, those institutions that have a large core general education program, particularly if it's spread across the four typical areas — 1) communication, written and oral, 2) social science and history, 3) natural science and mathematics, and 4) fine arts and humanities — have a better record of learning in the six competency areas.

Fourth, institutions that converted their mission statements to actual practical statements about what it is they wanted their students to know and to be able to do had a better record. I like what Pat Cross, one of my favorite writers, says in this area: Shifting the purpose of education away from teaching semester courses and toward producing student learning — toward putting the focus on outcome and change of behavior, as opposed to a set of requirements — is a conceptual change of major proportions. I also like what Ernie Boyer said Monday, that we're absolutely convinced about the length of a college education, but totally confused about its content. We just know it takes four years to get a degree, but we're not really sure in too many institutions what it is we want our students to know and be able to do. I'd like to urge all of us to move in that direction.

The degree to which institutions focus on helping students make the transition into college and offer basic intake services in a very intrusive way was a fifth factor shown to have an effect on persistence.

Finally, those institutions committed to evaluation also had a better record.

Four Factors Least Related to Student Persistence

I indicated that Dr. Forrest studied fifty different features. I want to share with you now those factors found **least** to be related to either student learning or student persistence. This may be a little painful. We're going to get some new thoughts, perhaps, and we're going to raise some new questions.

This first one is particularly painful for me because I worked hard for my Ph.D. We know that in order to be an outstanding teacher you must have a Ph.D., right? Wrong! There's no evidence to suggest that those institutions that had a large percentage of their faculty with Ph.D.'s did a better job of either delivering learning or retaining students.

A second factor least related to student learning is colleges' student-faculty ratio. We need to begin to question if it really is true that we cannot function efficiently if we move from a ratio of 12:1 to 14:1. There's no evidence to suggest that a small student-teacher ratio makes a difference. I'm often asked if we should have courses in which 300, 400, or 500 students are in one class. It depends on the course and on the teacher. The criterion is, do you have a teacher who, three days a week, can organize and deliver a message that connects, that captures? If you do, I think it would be unethical to restrict that class to 30 students and deny 470 a chance to be exposed to that kind of experience. I'm also asked if I think administrators ought to teach. Yes, but only if they're really good.

A third factor is average faculty salary. You know that the outstanding teachers today are teaching for the money, right? Wrong! The outstanding teachers are in our classrooms because they have a mission, a burning desire, a drive to make a contribution to the life of another person. I happen to believe that we could attract more people with a sense of mission, obviously, if we had higher salaries. Almost everyone has spoken to the problem of competition. What happens when a company will pay a person who just graduated with a baccalaureate degree $30,000 to sit in front of a computer, when a school will pay someone $15,000 to sit in front of thirty students? Please don't over-interpret this item. It simply indicates to me that we must become **much** sharper in our selection of teaching talent. We should be looking not only at teachers' credentials, but also at whether teachers have the kind of talent that reaches students, that motivates, and that results in student learning.

The fourth and final factor that was among those least related to student learning was the number of books in an institution's library. A lot of colleges send out admissions materials selling the campus's wonderful buildings, its great location, and the impressive number of books in the library. Why don't they sell what it is they do for their

students in terms of increasing their competency and preparation for life?

What Can Be Done to Increase Student Competence and Persistence?

What are we using to measure education? Typically, we're looking at inputs and not paying enough attention to the output, the outcome, the result, the product. I happen to believe that it's **the product** that parents are willing to pay for for their son or daughter, the outcome — learning, increased competency. Value-added will sell with the taxpayer, if it can be identified. Value-added will sell with the legislators.

The ACT is in the process of completing a major project for Jossey-Bass that's to be the state of the art in college retention. We're organizing the book around what we call the "forces of attrition." We don't like to talk about reasons students drop out because dropping out is a very complex decision on the part of the student. Many factors come into play, so we talk in terms of the forces. One force is academic boredom. What are its roots? If a student walks into a class and experiences poor teaching, that contributes to it. Let's go back to our scale. Does poor teaching add much to the benefit side? The benefits are very light and the costs are heavy. What about a student who walks in and has already mastered the content of a course? If we're not diligent about our placement of students in courses, what happens? The serious, the conscientious student will judge that subject to have little value because he or she has already mastered it. It doesn't add much to the benefit side of the scale.

A lot has been said about academic underpreparedness, and clearly, students who fall into the bottom 10 percent or 25 percent of any freshman class across America are more dropout-prone. We know that literacy as measured by some of the test scores over the past several years has been declining. Maybe that's what John Naisbitt had in mind when he wrote in *Megatrends* that what we need are two required foreign languages, and one of those ought to be English. I like the vivid way in which Pat Cross said, "We have no more right to expect a student without reading skills to be an effective learner than we have to expect a carpenter without a hammer to be effective at pounding nails." The point I want to make very clear is that there is a cognitive and an affective process involved in working with the academically underprepared student, and too often we think if we take care of the cognitive we have "fixed" the student. Our experience at the post-secondary level suggests that's absolutely false. You simply cannot overcome twelve years of learning hopelessness in one course in reading or writing. Self-concept must also be a part of that process, or the student keeps saying to himself "I can't do that." Helping academically underprepared students involves more than fixing one of their cognitive skills. As Henry Ford said, "Think you can, or think you can't. Either way you'll be right." I think that is very applicable to academically underprepared students.

Students who are undecided about what to major in, what kind of

a career to pursue, are dropout-prone students. What's the implication for the institution? We ought to treat each one of our entering freshmen as undecided and in need of some help with career/life planning. That's the best way to put into place for students the kind of motivation that will make them learning, productive students in the classroom. Once they can begin in a thoughtful, systematic way to arrive at some kind of a goal that they're trying to get to via your programming, they'll be better students and they'll be more likely to stay in your institution. Almost without exception we find that the institutions with extremely high retention rates are giving emphasis to helping their students with career and life planning. They're also strengthening the delivery of their academic advising.

Another factor is related to student retention. It's not enough to offer certain programs and services on a voluntary basis. If you set up a study skills program and you announce, "We've got a study skills program if you feel like you need it," who will you find lined up in front of the study skills center? Those who need it least. The student with a B trying to get an A to help him get into medical school. That's not a bad use of a study skills program, but the person who already is self-conscious simply will not go there. We need to be intrusive, and we need to make such programs mandatory, and then when we send students to them, we need to make sure that we offer them a good experience. We can't use professors whose courses aren't making it to teach the career-planning course. That's double jeopardy.

In order to better serve students, it's essential to have and use intake data. I think this is a pretty powerful statement, and I really believe it. Without intake assessment, institutions are forced to process students as standardized objects moving through the campus on an assembly line.

A major study, *What Works in Student Retention*, also reports factors that are important for retention. Nine hundred and forty-seven people from individual campuses, people who were judged by their campus to be the most knowledgable about retention in their institution, were asked to rate, on a scale of 1 to 5, how important various factors were for retention. Rating very, very high were the attitudes of faculty and staff and top-quality teaching. You can see the importance of these two factors in contributing to the amount students learn.

We're going to have to get more serious about selecting the right person for the right responsibility. That's going to be the next wave of change in American higher education. We're going to have to identify people who have "woo" for certain important positions on the campus. A person who has "woo" is a person who gets excited when other people come to him. Wouldn't it be wonderful if our receptionists and our clerks in the bursar's office had "woo"? Or if librarians got turned on instead of turned off when a student wanted to get a book out of the library?

Competent, Caring Teachers are the Most Potent Retention Force on a College Campus

A major review of the literature cited seven studies (it could have

cited 700) about the quality of the relationship between a student and her or his professors. A positive interaction facilitates the development of healthy attitudes toward learning as well as toward the college. My good friend and colleague, John Roosh, a professor at the University of Texas, describes the real genius of teaching as exciting students to **want** to learn what the teacher has to teach. It's not how much the teacher knows. That's important, and there's a level of competency that's important, but that's not the real genius of teaching. Also, outstanding teachers are persons who do more than give good grades. I thought you might enjoy this practical definition of a grade: A grade is "an inadequate report of an inaccurate judgment by a biased and variable judge of the extent to which a student has attained an undefined level of mastery of an unknown proportion of an indefinite material."

The bottom line is that caring, competent teachers are the most potent retention force a campus has. Times have changed. We must move away from the traditional indicators of quality, because most campuses cannot afford a teacher who writes a great book and then reads twelve-year-old notes in class. I have nothing against research and publishing; I do a lot of both, and they're absolutely necessary. In too many institutions, however, the emphasis is not on outstanding classroom teachers. If the only way you can make it to the top in terms of salary, promotion, and tenure is through research and publishing, then that's where people will tend to line up. If you can't be an outstanding teacher as well as an outstanding researcher/writer, what's going to give? Some are turning to reading twelve-year-old notes in school. I happen to believe that not many outstanding teachers are doing that. Not teachers who have a mission, not those with a burning internal desire to make a contribution to the lives of other people.

I want to share with you an exciting development that's been going on now for quite a number of years at the elementary and secondary levels. Dr. Donald Clifton, the President of Selection Research Incorporated in Lincoln, Nebraska, is now working with over 300 school systems across the country. He is studying outstanding teachers as measured by administrators, peers, and students, typically by asking them to show him the ten teachers they want more of in their school system. He then conducts a structured interview to identify the common themes that he finds among the truly outstanding teachers. Finally, he trains appropriate staff to detect those themes as part of the process of interviewing and hiring new teachers. Here are the themes that he finds common among the really outstanding teachers:

1. Mission is right at the top. Mission is the belief that students can grow and attain self-actualization, belief in talent, respect for the learner, and the goal of making a significant contribution to the life of another person.
2. Empathy.
3. Rapport drive. Outstanding teachers say, "I want my students to like me." If you ask them why, they say, "It makes it easier

to teach. More learning will take place when the students like me, when there's rapport and relationship."

4. Individualized perception. The outstanding teacher spontaneously thinks about the interests and needs of each student. When Jane or Bill walks in, the teacher naturally calls into play all there is to know about that student.

5. Spontaneously listens. Outstanding teachers have a capacity to receive satisfaction when growth does occur.

I want to close then with a very basic notion. In some ways it's my simple critique of some of the reports that we have heard over the last months. I'd like to suggest that requiring courses does not guarantee learning, and that's not terribly profound. Competent, caring teachers in the classroom, who motivate and deliver learning, can assure learning. Don Clifton's firm has a guiding motto: "Your greatest contribution to mankind is to be sure there is a teacher in every classroom who makes sure that every day students study and learn and feel like real human beings."

Let me close with my favorite poem, entitled "Bag of Tools." I think it really captures what teachers are all about as they work day in and day out, face-to-face with students, making a difference in the lives of young people. It's about builders for eternity, and I think that's who teachers are — builders for eternity.

"Isn't it strange
That princesses and kings,
And clowns that caper
In sawdust rings,
And common people
Like you and me
Are builders for eternity?

"Whenever civilized man sacrifices a single soul
Or turns his back
On the first child's cry,
Something is lost that's greater than no man's life,
Love dies, caring leaves.
And when love dies
There's only stone and wind and empty days.

"Each is given a bag of tools,
A shapeless mass,
A book of rules;
And each must make
Ere life is flown —
A stumbling block
Or a steppingstone."

That's what I think teachers are all about, putting into place stepping stones for young people, helping them on the road to becoming. Whitman said, "Create great persons, and the rest follows." What a beautiful way to leave your footprints on the sands of time.

Coming Together for Excellence

Roxanne Bradshaw
Secretary-Treasurer
National Education Association

Today marks two significant anniversaries. One of them I know you're going to have some sense of positiveness about, and the other you may not feel quite so good about. The first anniversary is that of the great seal of the United States, which was adopted 202 years ago by Congress. On the seal are an eagle holding an olive branch and the slogan "e pluribus unum," "from many, one." The slogan, of course, has served many causes and seems appropriate today as we are coming together for excellence. I would also like to remind you that today is the anniversary of the nonguilty verdict growing out of the crime of the century of the 1800s. This was the day, in 1893, that Lizzie Borden was acquitted of the charge of murder, specifically, of hacking her father and her stepmother to death. The acquittal, however, never took hold in the public mind. Otherwise we would never have had the ongoing statements that occur and reappear in American literature: "Lizzie Borden took an ax and gave her mother forty whacks, and when she saw what she had done, she gave her father forty-one." We in education have all been given forty whacks

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this year. But we're still here, and we're going to start giving back those licks on behalf of education.

Equity Must Accompany Excellence in Education

A major concern that the National Education Association has had is the cause of equity and excellence. Educators at all levels are facing an increasingly intensive attack because of the shortcomings perceived in the education system, and I always like to emphasize perceived. The attacks come not only from the outside. There certainly is also a segment of the population inside academe that blames our educational woes on the past quarter-century's efforts to bring equity into the classroom. The argument put forth is that the efforts to extend equal educational opportunity to those who have been left behind and virtually forgotten has led to a lowering of standards. Therefore we should abandon the continuing efforts at equity and forfeit that for the sake of excellence. This argument is wrong and self-defeating on its face. We all know that if equity does not accompany attempts at excellence, we will backslide into a situation that would be pre-1954, into a situation of neither equity nor excellence. And we would not achieve the levels that are needed by society if, in fact, we are all to live successfully in a new and more complicated world.

Evidence from the National Assessment of Educational Progress exists to show that educational gains have been made, even as measures of equity were instituted and enforced. In the southeast section of the United States, where increases in general educational levels have taken place, especially among Black students, that has been true. The regressive school of thought that I just referred to, and that I will refer to throughout this presentation, is a part of the general backsliding we find today in our dedication to equity. The backsliding was led, unfortunately, by the federal government, a government that lacks in leadership for education. The proposed federal cuts in the education appropriation, including higher education, is just one of the many problems that we are experiencing today. We are seeing today, in this nation, states that spend on elementary and secondary education — for 40 million persons ages five through seventeen — a total dollar amount of $115 billion. In addition, those states spend on their institutions of higher education — for 12.4 million persons attending those institutions — a total dollar amount of $70 billion. Yet the total budget at the federal level for all education is less than 2 percent. Two cents of every dollar that we pay into the federal government is what we have chosen to spend on education.

There is a proposed change in the definition of discrimination. The Reagan administration seeks to establish, as a principle, that discriminatory intent or purpose must be in the minds of those seeking to discriminate, rather than defining discrimination as you and I as educators would, as the effect or result of an action. While I was teaching elementary school, I found that I had developed eyes in the back of my head, which has been most beneficial throughout my career. Only after eighteen years of teaching was I starting to feel that maybe I was clairvoyant. We would have to be clairvoyant in

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order to know what was in the mind of a person in terms of purpose or intent when it comes to discrimination.

Another part of the backsliding is the proposal to relax the legal obligation to educate handicapped children, PL 94-142. Under pressure, Secretary of Education Terrell Bell finally had to acknowledge that the administration had gone a bit too far.

The Reagan administration recently backed a Supreme Court decision that permits educational institutions that practice discrimination against women to retain federal funding. This particular decision limits coverage of Title IX, the chief federal anti-sex bias statute, by interpreting it to prohibit discrimination only in those college programs or activities for which federal funds are specifically earmarked. When we deal with that, we're talking about a loss of ten to fifteen years of work in that area. We have an administration that continues to say the laws are in place for equal rights. "We do not need an ERA because we have already achieved equality."

The Reagan administration has substituted rhetorical appeals for real action on school problems. The key issue that was targetted by Reagan when he started into his school program was, "We need to get back to prayer in the schools because we are a good Christian nation and we need to let those children pray." And I say that as long as there are math tests in schools, there will be prayer in schools. Consequently, I don't think we need to worry about that. Fortunately for us, Reagan guessed wrong. Prayer in schools was not the irresistible issue for election year, and the constitutional amendment was defeated in the Senate. The Equal Access Bill, or the so-called "son of school prayer," would have forced public secondary schools to open up their facilities and make them available to students for religious purposes, or schools would have had to forfeit any federal funding that they received. This blatant backdoor attempt at bringing religion into the schools was fortunately stopped in the House.

The issue of tuition tax credits is going to continue. It's going to be moved off the back burner and brought to the front burner, as you heard Reagan say himself. While it has been defeated regularly and repeatedly, it is still alive and still well in the minds of many of those who are part of the new religious right. It is supposedly there to appeal to those who see themselves as overburdened by taxation. It should supposedly bring about some form of tax relief for those who would choose not to send their children to public school. I feel that we have many fine private schools in this nation, and it is the parents' right to choose to send their children to those schools. But I do not want to detract from the public schools that all of us, as citizens in this nation, must commit ourselves to, through secure and sound funding for all children who do not have the choice to go to a private school. Disunity and estrangement is what we're dealing with.

The Need for K-12 and Higher Education to Come Together

The disunity between K-12 and higher education cannot continue in the light of all the foregoing assaults on the equity so crucial to

educational excellence. The past twenty years have seen the distance between higher education and K-12 relationships widen, unfortunately. There are many reasons for this. One I'd like to share with you is the fact that I don't think we have much empathy for those individuals in whose shoes we have never walked. That reminds me of a very simple incident that occurred when I was teaching first grade in Pueblo, Colorado. I had made some derogatory comments about the kindergarten teacher because I didn't like something that had been done the year before, and because it was obvious to me when those children arrived in my classroom that there had been some deficiencies the previous year. The next year I taught kindergarten, and I shall never forget the first day. I said to the children, in the tone of a good, structured first grade teacher, "Will all of you please line up at the door." Three children meandered toward the door and stood there, very intimidated. Nine of them looked at me like they had no idea what I was talking about. About ten more looked as if they were asking themselves, "What am I doing here?" Five of them started crying. One little fellow was right next to my desk. I said, "What is wrong? Why are you crying?," and he said, "I don't know what I'm supposed to do." I forever after blessed all kindergarten teachers. Each one of us, every year, reaps the rewards of the previous year and what has been taught, and we have no empathy for the content that one has to deal with and the concepts that are conveyed every single year. I think frequently we don't have respect for each other because we have never been in the other person's place. Once I entered higher education I had a totally different respect for higher education faculty, and I certainly now have an even greater sense of esteem for those of you who teach K-12.

For K-12 teachers, one of the frequent reasons for a lack of empathy, besides not having stood in the other person's shoes, is that you've seen collegiate schools of education as huge administrative bureaucracies that are unresponsive to ordinary K-12 needs and concerns. When many of you left college and went into the classrooms, you found there were many things you should have been taught that you weren't, that you lacked many of the skills you needed, and that all this had obviously happened because the school of education didn't care about you.

One argument that I've carried across this country is the coming together of schools of education and K-12 teachers. I went into teaching because of the joy of teaching that was transmitted to me through the experience I had in the school of education. But some people haven't had that. That means we have to work harder together to resolve our separation.

K-12 practitioners coming into contact with academic leaders in various disciplines other than education has caused practitioners to take a wider, less constrictive view than that of the technicians in education methodology. This has again separated us, one from the other. Teachers' disunity at higher education levels was aggravated by a seeming lack of purpose and direction on the part of higher education leadership, some of whom were slow to pick up on the

movement toward education and equity. When higher education did embark on an advocacy course, the schools of education, often the stepchild in various institutions, were not generally part of it. Now is the time for us to come together for excellence. We now have some common goals to work toward together. One of the major challenges faced by higher education and K-12 is that the two groups are not used to being against each other on issues that are related to education, and we must not allow ourselves to be used by our enemies on those issues where it may not be so easy to identify a focus of commonality.

The Need to Maintain Gains Already Achieved

We must maintain the hard-won gains made in collective bargain ing, not only in K-12, but also in higher education: better salaries, improved working conditions, equality of pay for women, equality of pay for minorities, and preservation of academic freedom, which we're having to fight harder and harder to maintain. We must resist the politically popular panaceas that don't advance the cause of quality education. We must maintain a watch to make certain that we don't jump into compensation plans without clearly defined performance criteria and without input of faculty who are involved. Merit pay can be manipulated to pay off friends and punish enemies. It is a form of principal patronage. Any form of plan that serves as a substitute for badly needed salary increases will be fought against by the National Education Association. All teachers in this nation need a salary increase. The NEA is going to be recommending looking at a $24,000 beginning salary. We need to be talking about these things, and we need not apologize about them because they are a part of the reality of what is needed in education and of what has been wrong in the past with education.

In higher education, I have lived under merit pay, and in many ways it has already been instituted beyond the point of recall. But in most forms it is controlled either through a bargained agreement or through strong faculty senates. I'd like to share a story with you. I was on the campus of a university that has a very large, a very fine school of education. I had gone there to make a presentation to the Student National Education Association of the NEA. When the faculty heard I was on campus, they asked me to come meet with them during a coffee break. Although they thought they'd have five or six people, they ended up with forty-five. After the meeting was through it was very apparent to me that the reason they wanted to meet me was not because of my involvement with the Student National Education Association, but because they were getting ready to organize a faculty unit.

Immediately following our discussion, which dealt mostly with merit pay and the problems with merit pay on the campus, I was asked to meet with the dean from the school of education. I told him I'd like to know something about the campus and some of the programs. He told me that what he was most excited about was how well the merit pay program was working in his department. And I said, "Oh, I'd

like to hear more about that." Of course I set him up by saying that. I should have said, "I want to tell you how upset your faculty is." He shared with me all the wonderful things that were happening, that he had $40,000 a year that he broke up among his faculty members, and that he always gave at least one-third of his faculty merit pay of $2,000 a person. I logged all this information and compared it with what I'd heard just 30 minutes earlier — that no more than $10,000 a year was given out, that the dean never selected more than five persons for merit pay, and that the amount was always less than $1,000 a person. And I thought, how often we're not communicating with each other, and how often we're not working on these issues as a team.

It is important that we understand some of the issues that are going to be coming up other than merit pay. One more thing I would like to mention about merit pay, though, is that we're starting to see some studies that are showing that merit pay has never worked in the past. That's why every twenty years it's buried and then rises from the dead to be buried again. We're into this twenty-year cycle, unfortunately. A study done by the Urban Institute of Washington, D.C., for the National Institute of Education states that we should "avoid mandating highly specific requirements relating to teacher incentive plans until there is much better and more convincing evidence that certain practices work well and under a variety of local conditions." The statement was referring specifically to merit pay.

The career option plans that we've been talking about across the country exist in many different forms, and I think the thing that we need to be concerned about is how much involvement there will be on the part of teachers. Are they going to be involved from the inception of the plan and through the total development of the plan? The salary needs of all teachers should be substantially addressed and resolved. There should be involvement of teachers in the planning of any type of program development for career options. And we must be certain that there are provisions for instructional ability without removing excellent teachers from teaching. We lose a lot of teachers to administrative work, not because the teachers are not excellent or because they don't love teaching, but because they have no other economic choice. It would be nice to be able to choose between those issues. We must not cave in on career options, nor on merit pay, based upon what I would call subjectivity.

The maintenance of academic independence and integrity is of utmost importance, and I see day in and day out threats coming forward relating to academic freedom. Those frequently take form in the ways in which persons are paid. We find that merit pay schemes can affect academic freedom, instilling what I would define as a fear of being controversial at the risk of being overlooked for rewards and compensation that would otherwise be given to the "go-along" types. I've never heard the argument about academic freedom as it relates to merit pay, and I think that's a very serious consideration.

Concerns About Excellence in Education

The NEA *Blue Ribbon Task Force Report* is going to be coming out

this summer, and everybody is waiting for it with bated breath. We have been involved with it now for close to nine months. We have met monthly, sometimes bimonthly, sometimes trimonthly in order to resolve the definition of what educational excellence is according to teachers and according to the teaching profession. Unfortunately, this debate has dragged on, and I have a feeling that we're going to lose some of the impetus and the energy that we had a year ago. I hope we don't deal with that through yellowed papers being put on shelves and being taken down twenty years from today. The *Blue Ribbon Task Force Report* recommends that every practicing teacher should be evaluated. We are talking about having observation by direct classroom visitations over a period of time by evaluators who are **trained** — and we are emphasizing that in our document. We want time and energy to go into monies for administrative personnel who are given the mandate of evaluating teachers. A standardized pencil and paper test as now mandated in Arkansas and in many other states is no substitute for this form of evaluation. What square does one blacken, or what blank does one fill in with a soft lead pencil, that's going to indicate caring, attention, and the ability to communicate thoughts, knowledge, ideas, and even inspiration to students? I do not know how you test for those qualities. Teacher tests have become the chief political panacea in both higher education and in K-12, and we must continue to fight the effort to test for the purpose of quality instruction in the classrooms of America today.

Another gambit that throws emphasis off of the real issue is good old-fashioned discipline. My major concern with that is the lay population's definition of discipline. Discipline too often is defined as the infliction of physical pain, and in my psychology text that is exactly how it is defined. We talk today, I hope as enlightened educators, about behavior controls. We talk about redirecting energy into positive channels, and that's what we should be talking about.

Having carried my credential in vocational education over a number of years, and having instructed in community service occupations at an area vocational program in Colorado Springs, I have a great deal of affinity for vocational education. And I have a lot of personal concern about what's happening to vocational education during this time of overemphasis on excellence. I wonder if we will lose the funding, the energy of the programs, and the ideals of the concepts that we have toward vocational education during this time. I have a real fear about that. There is a recent report related to this called *High Schools and the Changing Workplace: The Employer's View*, authored by the National Academy of Sciences. It outlines educational competencies needed by the high school graduate for success in the workplace, both at the entry level and throughout a forty-five to fifty-year career in a constantly changing economic environment. The report does not address the problem of high school dropouts. It does not offer specific curriculum advice. It does not concern itself explicitly with other purposes of education, such as preparation for effective citizenship and social participation. Its sole objective is to identify from the employer's perspective the basic educational needs for effective upward mobility. As a psychology instructor, I shudder at

the thought, even when I say that. My personal concern is that we are on the way to labelling students early in life so that they are channelled into preprogrammed life-styles for the remainder of their lives, very similar to what all of us have seen and studied in reference to the European education plan. If students fail a particular academic test, they are then channelled immediately into vocational education. We must be aware of the structured system that would lead to those types of ideals and concepts. I believe that this should be of serious concern for all of us in K-12 and higher education, and that, again, we need to work together on this issue.

What We Can Do to Come Together for Excellence

In conclusion, I will tell you that I've spent the year working on and talking about coming together in a variety of ways, not the least of which is talking about the Democrats and the Republicans. If in this room there are any sincerely believing Republicans, and you're not involved in your party, shame on you, because you should be involved in that party; you should take an active role in that party, because we are not going to return to traditional conservatism until you do that. We can't go on and deal with political compromise, which is really the definition of democracy, if we don't have legitimate liberals and true conservatives. That's what it's all about. And those of you who have given up your membership in the Republican party, you're not helping me at all as a Democrat, so get back in there. I would say that if we're going to be talking about coming together, then there are a lot of things we should be doing together. If we are going to spend our time spinning our wheels, talking about reform, we're not going to reform a thing.

What can we do? I think three things are critical. First, we should be developing institutes for the study of educational reform and change within each of our states, and through research we should be identifying elements that we know to be true that can then be systematically brought about in changing the existing educational system. We should do that in a manner that will allow all of the institutes to participate equally. We need to allow all children to have equal access to the things that we know work in learning. Second, we should be looking at developing schools into community centers, at rebuilding and revitalizing community commitment to education and to the schools that are ten to fifteen blocks from where people live and work. We should be actively integrating those schools with the daily lives of nearby people, so that the schools are used before 7 o'clock in the morning until late into the evening, and are accessible for functions of the community. Finally, we should all be involved politically, so that we know that we can guarantee the monies, we can guarantee the commitment, and we can guarantee the definition of the programs that come out of legislatures. We should be involved in those so that we not only have the opportunity to bring about positive change, but also have some control once those changes are implemented. The state of this country exists in the minds of the students in this nation. Achieving these three things would be a major step forward for children in this country.

Summary, Question/Answer Period

Moderator: Ken Woosley, Director, News Media Services, Eastern Montana College

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1. Bradshaw spoke out strongly encouraging teachers to become involved in the political process. Political issues cannot be avoided, especially by teachers. There is not anything that teachers do in their classrooms that is not touched in some way by political decisions.

2. There is a shortage of teachers today, and the shortage of teachers is going to continue to increase over the next ten to fifteen years. According to Bradshaw, the National Education Association has used two major thrusts in an attempt to improve salaries for teachers. The major thrust has been collective bargaining. Second, the NEA has been active at the local level, state level, and national level in lobbying for increasing funds to support education.

3. For the most part, school districts lack adequate teacher evaluation systems. Of the 16,000 school districts in America, fewer than 7,000 have any evaluation system at all.

4. Tenure, according to Bradshaw, is a process that is in effect to protect teachers from punitive and capricious actions of employers that may be used to relieve teachers of their duties for reasons other than competency in teaching. Tenure guarantees due process to teachers. However, Bradshaw is aware of no tenure law in this country that protects teachers' jobs if the teachers are incompetent.

5. According to Bradshaw, NEA's major criticism of merit pay is that it undermines the teaching effort in a school. Too often merit pay is used to pay off friends and punish enemies. Merit pay systems create an environment in which individual teachers who have been working together begin to look at one another as separate entities and start to move away from each other as cooperating colleagues. They begin to go their own ways. Furthermore, merit pay is generally used by school systems that do not pay teachers an adequate salary.

Panel of Reactors

Moderator: Hugh Van Swearingen, Chief of Bureau, Associated Press, Helena

Panelists: Gary Johnson, Head Counselor, Billings Senior High School

Fred Deigert, President, Valley Medical Society, Billings

Buzz Christiansen, Superintendent of Schools, Yellowstone County, Montana

Roberta Snively, Superintendent of Schools, Big Horn County, Montana

John E. Whooley, Associate Dean, School of Education, University of Wisconsin, Eau Claire, Wisconsin

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Van Swearingen:

If I might very briefly summarize the key points of Dr. Noel's talk, the more that students learn, the more they're going to persist in education. And the bottom line is that you have to have good teachers. I'd like the panel to start off. I have a question first for Gary Johnson, a high school counselor. I get the impression that a major goal of high schools and perhaps all schools in Montana is to retain students, not so that you can teach them, but so that you can support the educational institutions, get the A and B payments. Would you like to address that?

Johnson:

I could respond that we know how our bills are paid. Certainly A and B are important. We certainly are encouraging kids on a daily basis to stay in school, and some of the thoughts that Dr. Noel brought up about retention certainly have application to high schools. We do try hard to keep kids in school, yet we don't believe that all kids should be in school.

Van Swearingen:

What do you think about retention? Sometimes it seems to me that maybe we should be trying to help the academically unprepared out the door rather than help them stay in the classroom. We could empty out some classrooms and cut some costs to taxpayers. What do you think of that?

Deigert:

As far as keeping students in school goes, you have to do it on an

individual basis, and you have to find out if students really know why they're there in the first place. I have a hunch that if they know why they're there, they'll want to be there. I don't think that you should throw somebody out because they shouldn't be there. I think you should find out if they know why they're there. If they're there to learn how to fly an airplane and you're trying to teach them American history, you shouldn't just kick them out, you should slide them over into the curriculum that will teach them something more about what they want to do. I think that's the mechanism we should use.

I have five children who span the range from grade school to high school. Their answers to my question of which classes they like and don't like is revealing to me. My children like those classes where they know why they are learning the subject matter. The don't like the classes where they don't know why they are learning the subject matter. Motivation begins with a student understanding why he or she is learning a particular subject. If teachers spent two-thirds of their time answering the question of why students need to learn a subject, and only one-third explaining what they're trying to teach, I think students would learn more.

Van Swearingen:

A question for our two county superintendents. Dr. Noel talked about competency testing or life-skills testing rather than testing to find out, say, how much mathematics students retain. The whole subject of competency testing is quite controversial. What do you think of it, and particularly, what do you think of competency testing for life skills — testing not just whether students can add, subtract, multiply, and divide, but whether they can balance a checkbook?

Christiansen:

Competency testing is a very controversial item, and we hear of successes and failures throughout the country. I think that any test that is given to students at any grade level in any district must be a local test, must be based on their curriculum, rather than being a state-mandated or federally-mandated test. I'm a firm believer that students must learn and must be passed on to different levels based on their achievement level and their ability to learn.

Snively:

I don't think at this time we are testing as much for life skills as we probably should be.

Whooley:

Perhaps some of you are aware that the state of Wisconsin has gone to competency testing through legislation on the basis of a voluntary program. Only districts that want to be involved are involved. There was an expectation that about 40 districts would get into the program the first year. At this time, 110 to 115 districts in the state are using voluntary competency testing. The State Superintendent of Public Instruction is using this approach essentially as a means of improving curriculum design and instruction at the local level. I don't think his real concern is with test scores. I think he's using this as a mechanism

essentially to improve instruction in the state. The Department of Public Instruction provides teams that are on the road to provide in-service training for the local districts, and whenever they come to the Eau Claire area I attend their meetings to see how they interact with the locals. They're doing a very excellent job with providing in-services for faculty in the areas of curriculum design and assessment.

Van Swearingen:

How do any of you on the panel feel about a satisfactory grade on competency tests being used as a graduation requirement, particularly at the high school level?

Whooley:

If competency testing is done on that basis, it had better be done well. A couple districts in the state of Wisconsin are doing that, but that is not the common practice there. Typically, the districts are not using it for either promotion or diploma purposes, but we've been well-advised and we've had legal counsel to the effect that if we do, we want to be sure that we stay within the bounds of the law and do a first-rate job so that we don't end up with due process problems.

Christiansen:

I'd like to get back to the matter of local testing. Sometimes a test that does not originate in the district based on their curriculum tends not necessarily to judge the achievement of the student on the school's curriculum. A school's curriculum may lend itself one way, and the test may lend itself in another. That's why I think that if you're going to have a competency test that's appropriate, it needs to be based on the local curriculum.

Deigert:

Was it implied that the competency test was a tool to determine if the teachers are competent in a setting? In other words, do the tests that are being given measure whether teach2rs are teaching the rig?t things? Do the competency tests really belong at the educator level and not the learner level?

Whooley:

Basically, they're not being used in Wisconsin to evaluate teaching. However, teachers were involved when the legislation was passed, and it's a matter of fact that the evaluation results can be used to help improve instruction. They're not to be used for promotion or tenure or salary decisions, however. One of the benefits has been the involvement of faculty at the local district level in the development of instructional outcomes (which Dr. Noel emphasized this morning), and in the design of appropriate evaluation tools to assess those outcomes. Any district that wants to be involved in this has to provide evidence for the empirical validity of the testing instruments that are being used in that particular locale. But there's a key point here that we need to make, and that's the fact that we need to be addressing the matter of competency education, not just competency testing. I think if we get hung up on competency testing we'll do a disservice to the message.

Noel:

It seems to me that the basic question behind competency testing is this: What do you want your students to know and be able to do? Then students must be assessed against that. That's the kind of competency testing that I see as being needed. It really starts with a broad-based input process that indentifies the desired competencies as the result of the school experience.

Van Swearingen:

Dr. Whooley, what do you think of Dr. Noel's theories that debunked some of our sacred cows — for instance, that the percentage of Ph.D.'s on the faculty, faculty salaries, and student-faculty ratios don't have much to do with student growth or competency growth? Were you surprised by all this?

Whooley:

Not really. I concur with the results. A few years ago another piece of research was done that assessed the effectiveness of instruction cross-culturally. Three factors seemed to be most significant in terms of effectiveness of instruction (which was defined in terms of learning). First was empathy, the ability to walk in the student's shoes, which was on Dr. Noel's list. The second factor was what they called congruity, which means basically that the instructor is not a phony. Third was the notion of being able to relate to the students, and I think Dr. Noel referred to that as rapport. So his conclusions don't come as a surprise to me. In fact, I think we should probably take a closer look at, try to address more formally, some of the implications of incompetency in education that Dr. Noel was hinting at.

Christiansen:

I'd like to get back to Dr. Noel's reference to Dr. Boyer's quote that we know what the length of a college education is, but we're still confused about the content. Many times in teacher training programs we've heard the criticism that methods tend to rely on theory and philosophy rather than reality. It has been suggested that college teachers return to the classrooms occasionally to feel the pulse of reality. Dr. Noel, what do you think should be done on college campuses to make courses in teacher training more appropriate to what teachers will need in the classroom?

Noel:

This is probably an oversimplificatin, but more attention needs to be directed to the affective side of teaching, as opposed to the cognitive side. What we're observing is, of course, a fantastic amount of effort going into the subject area, and not enough effort going into the selection of people who probably have the talent to be outstanding teachers. Also, we're not providing enough experiences, not enough opportunity for teachers to develop and work on such things as the importance of empathy. So an oversimplification would be more attention to understanding human behavior and technique, coupled, of course, with a rational, sound content base.

Deigert:

Dr. Crosby mentioned an aspect of education that hasn't been discussed very much. He said that the quantity of education — the number of days and hours that we spend learning — is important. Is it necessary to have three months off, are we an agrarian society, are we an industrial society, are we a mixed society, do we have to have longer durations of learning? Dr. Noel really didn't address that. Maybe he alluded to it. I think that as taxpayers — we're all taxpayers, and some of us are teachers — this question is important to us. If it's better to go to school twelve months out of the year, it'll cut down on building costs and so on. Would you comment on that?

Noel:

I'm of course most familiar with the post-secondary level, and I see two or three things. First, I do see a real attempt on the part of post-secondary education to take advantage of the full summer term. In other words, more and more institutions are having two six-week sessions during the summer for the students to take advantage of the learning opportunity. On a less positive side, I find it disturbing on some campuses to note that we're looking for ways to shrink the number of hours required or the number of days sessions will meet. I find that terms are getting just a bit shorter. Also, I occasionally see an institution changing a three-hour course into a four-hour course, and I'm not sure that the content is expanded by 33 percent when the number of hours are changed. I see some instances where I think the change is motivated by economics, so at the post-secondary level I think there is some room for improvement. Yet on the other hand I see some opportunity for students to expand the amount of time for taking advantage of an educational enterprise.

Johnson:

How can secondary schools better prepare kids for going to college?

Noel:

I think a recurring theme throughout this conference has been that education really starts at the elementary or kindergarten or preschool stage. If I were to try to put a bottom line on quality education, it would be to find ways to identify the really competent teacher, to place more emphasis on the affective side than we have tended to in the past, and to build relationships. We could all tell stories about having a teacher who cared enough to go the extra mile to set us on fire. We only need a couple fires, because what happens is that we begin to develop. Teachers help us develop a talent, and then they help us practice it. They put into place the laboratory, the environment, where we have a chance to practice that talent until we really become good at it.

Then we have something called "spillover." Did you ever notice that if you develop one talent, all of a sudden you develop confidence in other areas? Think about that through the development stages. I could give you three distinct personal examples of how that happened to me, and each of those was motivated or ignited by a teacher. It's that element, it's that mission, it's that rapport or drive, it's that ability

to and that drive to make a contribution to the lives of other people that I think we should be looking for through the educational process.

Snively:

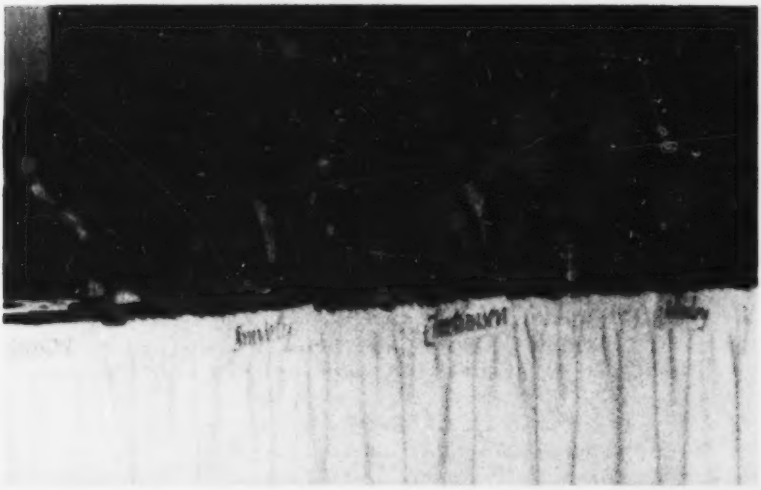
According to the information that was given to us by Dr. Noel, one of the reasons many students drop out of college is that they have trouble selecting a major or their career choice. Also, many who are academically bored don't have a career goal or goals and need to set realistic goals. At the elementary and high school levels we're doing career guidance work, but we need to do more, and then the colleges must pick up. Would Dr. Noel remark on that?

Noel:

My feeling is that the goal should not be to have students have firmly in mind what their life or career goal is at the time they leave high school and when they enter college. I think the post-secondary years are a perfect time for students to think in a more rational, systematic way about their options. They can begin to participate in value-clarification exercises. They can begin to think in terms of what goals are really important in life. Only after they've begun to get that into place can they begin to identify which careers would be consistent with those life goals. I'm upset that the colleges don't put into place a systematic opportunity for the students to decide. What I'd like to see happen at the high school and even junior high level is a career-exploration process, not a career-planning process.

Whooley:

I've always considered education to be a free enterprise rather than an inhibiting enterprise, so if somebody wants to major in history and drive a cab, I think that's great. Education is for people to make choices, and if that's what people want to do with their choices, based on their experience, I think that's what education's all about.



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Selected Questions from the Audience

Question:

Dr. Whooley, how do you see the public school system being effective in dealing with parenting skills that would allow the beginning school-age child to come to us with a well-developed cognitive base?

Whooley:

I would see here essentially the development of outcomes in terms of parental knowing and be-able-to-do concepts, in terms of elements of learning, in terms of elements of human growth and development, to prepare parents so that they can foster better learning environments for their children. As an example, I think there are very few parents who have any background at all in the whole matter of affective development. Materials that aid affective development can be investigated and used by parents — as well as by teachers — in dealing with children in their own homes to develop their own children's self-esteem, self-confidence, exploration, and sense of values. Those are the sorts of things that I think we can do with and for parents to make the actual formal schooling enterprise more productive.

Question:

Dr. Noel, I'd like to address the issue of entrance requirements into major universities and colleges. In the past, the traditional method has been to look at a student's grade point average (GPA), which has become a god in many high schools. But an A in one school is not going to be equivalent to an A in another school, let alone perhaps from classroom to classroom. Where do you see the major universities and colleges looking to help selection of students into their institutions?

Noel:

First of all, one slight correction. There are two gods. One is the high school GPA or rank, and the second is the American College Testing Program (ACT) scores. You put your finger on a very important issue in American higher education today, because for the most part American higher education is not selective. There is some evidence to suggest that probably as many as 60-75 percent of the institutions in America today are "open door," that is, they will accept a student if the student can find the admissions office and write a check for tuition. We're among friends, and that's the state of the art. Most colleges that are making admissions decisions are not going strictly by GPA for the very reason you mentioned, because an A in one school or one program may not mean the same as an A in another school or in another program. Consequently, when colleges make a selection decision they combine the high school record and a more

standardized measure such as the ACT. Let me make one other observation that I think ties very directly to this. As institutions move from the more selective environment that they were in a few years ago, when enrollments were escalating, to a time now when enrollments are declining, in essence institutions are becoming less selective. We are observing – and I think this is a very healthy sign – that more and more institutions in America today are requiring the ACT test for all their incoming freshmen, not to make the admissions decision, but to help guide and counsel students once they are in the institution, to help with academic advising and career planning. Those colleges that are selective are going to use a combination of high school grades and test scores, and those that don't need that kind of information for selection decisions are now using assessment data basically for retention purposes as opposed to admissions purposes.

Question:

I'm an elementary teacher, and I'd like to talk about that for a minute. Dr. Noel, I'm having some difficulty understanding what I think is a contradiction in some of the things you're saying. You say that we ought to be more concerned about the affective domain, yet the tests do not test affective domain at all. Schools therefore are judged not on the basis of what they do with feelings and empathy and so on, but rather on the basis of how competent they are in teaching students skills. Someone asked a little bit ago how you can train students to be better teachers in the schools. I don't know if there's a course available to teach people how to deal with the things that you deal with on a day-to-day basis in your elementary classroom. I'll cite my own situation as an example. This past year I had thirty students. Seventeen came from single-parent families, eight came from identified (I emphasize the word identified) alcoholic families, two were extremely bright students, four were in special education classes, and one boy couldn't get along with anybody no matter what. Finally, one girl had a mother who'd had a baby daughter in November, and this girl had to stay home two to three days out of the week to babysit; as a result she hated both her mother and her baby sister and ran away from home. I tried very hard to keep her in school and tried very hard to be somewhat of a sounding board for her, and keep her interested. I doubt very seriously if she learned a thing about reading, or much about math or anything else. I'm sure if you were to measure her competency at the beginning of last fall and again this spring, she probably grew very little, and if she did it was entirely on her own. Yet I think, in my own mind, that she probably had a fairly successful year, all things considered. My point is that we're being judged on the basis of what she learned in reading that year or what she didn't learn, and I find that a contradiction in what you're saying. You say, on the one hand, that we ought to be concerned more about the affective domain, but then on the other hand you say we've got to establish competency in value-added. I don't know how you do that, especially at the elementary level.

Noel:

Short of being Superman or God, I don't know how you could succeed with the kind of diversity you had. In that particular instance, I think the accountability may lie with the school, as opposed to the individual classroom teacher.

Question:

When I was teaching in 1970 in Illinois, we had quite a few students who were very poor learners, and we kept them after school in a special title program. Instead of teaching them math and science, we took them through a program to develop self-worth and self-concept. I've been out of teaching for several years, and I'm wondering if there is a separate curriculum within the elementary school to help the child develop self-concept and self-worth. I know a lot of children who come from very poor home situations who don't have that, and if a good self-concept is one of the first indicators to begin learning well, is this available?

Johnson:

I've heard that Havre has an excellent program. They have programs from the elementary level all the way through high school that work on self-esteem. We have a program at our school that deals with the affective areas. So there are some programs around that try to work with self-esteem.

Question:

I was interested in Mr. Noel's comment that there are major differences in colleges. I've seen newspaper articles that rate colleges in engineering, medicine, and other programs. As a relative newcomer to this state, I'm interested in knowing which institutions in this state are consistently putting out good, competent teachers. I would like to hear, maybe from some of the administrators who work in the state, which schools put out teachers whom they feel are exceptionally competent.

Dayton:

That's a good question to which you can get a great variety of answers. If you talk to school superintendents in the state, you'll find different superintendents who will swear by every one of the teacher training institutions and who will recruit preferentially. There are some who will recruit students only for Montana State University and nowhere else, there are some who will recruit only for Western Montana College and nowhere else, and so on. Sometimes it has something to do with where the person got his or her own degree, sometimes it has to do with an institutional philosophy matching the philosophy of the particular superintendent, and sometimes it has to do with a sort of self-selection of students who go to an institution who then turn out to be the kind of people who are at home in a particular school system. You can find people who will identify for you the number-one teacher training institution in the state, but you can get votes for every one of the institutions. That's not dodging the issue, because there are big differences in teaching in a class C school

in a rural area compared to teaching in a large metropolitan school system. Also, there's self-selection among the students in the un ·ersity system. They go to a particular institution thinking that's the kind of place they would like to be in, so you have student bodies with rather different characteristics in terms of a collective personality, outlook, values, and so on; and the students are at home in different kinds of jobs when they get out. Bill Johnstone has been a school superintendent for a long time. Would you disagree with that, or is that the kind of perception you have?

Johnstone:

School superintendents from their own experiences probably have certain places to recommend. I think another factor would be that certain institutions emphasize certain fields. Some have a uniqueness that obviously needs to be considered in making a selection.

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Final General Session

The Reports Are In. Where Do We Go From Here? 159

The Reports Are In. Where Do We Go From Here?

Statements by Panelists

Moderator: Irving Dayton, Commissioner of Higher Education, Montana University System, Helena

Panelists: Karen Trask-Doolen, School Board Member, Billings Public Schools

Bruce Crippen, Montana State Senator, Billings Linda Ruzich, Parent, Billings

Bill Anderson, Deputy State Superintendent of Public Instruction, Helena

John Board, President, Montana Education Association, Helena

Margit Thorndal, Teacher, Fred Graff Grade School, Laurel, Montana

Wayne Buchanan, Executive Director, Montana School Boards Association, Helena

Kelly Addy, Montana State Representative, Billings

Diane Parent, Vice President, District 4 PTA, Billings

Irving Dayton:

We've said many times that education is a very complex matter. There is no single solution. There is no panacea. Anybody who thinks there is doesn't understand the problem.

Now I'll set some ground rules for the panelists. I would like short, focused presentations from the panel. I would like each of you to identify the principal issue that came out of the conference, from either your personal viewpoint or from the viewpoint of your organization.

Karen Trask-Doolen:

One of the exciting things I see in education is recognition of the need to educate our children in the area of critical and analytical thinking. I applaud that and I support that. But I also have a concern with regard to that. I see us taking pot-shots at one another with that wonderful, critical, analytical thinking skill we have, and that

concerns me. If there ever was a time in education for all of us, each component involved in the education field, to put aside those negatives, to look for the positives, to be a part of the solution, not a part of the problem, it is now. We need to roll up our sleeves and work side by side. We need to build the strongest coalition we possibly can to accomplish what each of us is committed to, and that's what's best for kids. If we do not do that, we will not go anywhere. I think that many times we look at change with great fear, and that fear will block the opportunities that we have to achieve good things. Let's not be afraid of change; let's get rid of those fears. If we roll up our sleeves and work together in a coalition and we are one voice to our legislators and to the public, we can take the risks that we need to take to be successful for kids. In taking those risks, we must set aside our fears. We have to be extremely courageous because when we take those risks we will make some mistakes. But we can also achieve exciting and incredible successes. The trouble with doing nothing is that it's really hard to tell when you're done.

Bruce Crippen:

Our badges say, "It's a Time for Action." The question immediately arises, what kind of action? As a businessman, my role at the head of my business is that when I get the people who are associated with me together and we've got a problem, I have to avoid or try to eliminate an adversary relationship, because with that kind of relationship it's very difficult for us even to agree that there may be a problem. If we don't agree on what the problem is and the scope of the problem, we're not going to be able to solve it. I think this is somewhat where we are now. We've listened to people from the schools, school boards, teachers, those who represent teachers, administrators, politicians, parents, and probably even taxpayers. If we approached every one of them and asked what kind of action should be taken, we'd get a lot of different responses. We're going to find ourselves, I'm afraid, in a situation where we're going to have an adversarial relationship. I think this is our problem. We have to meet that head-on. We have to conquer that type of problem and get to a solution so that we can go down the line and unify, so that all of us can define where we are and where we're going.

I read *A Nation at Risk*, and as I started going through it I thought, "That's right!" The more I read, the more I enjoyed it. Until I got to the part about solutions, and then I thought, "I don't know if these are the right solutions." The solutions are tough. I think this is where a lot of us are. This is probably where the taxpayers, the average citizens, are. They're the ones who probably aren't nearly as represented here as they should be, and yet they're probably the critical key to all the discussion we've had these last three days.

I hope we have a lot of good questions on funding. We're going to talk about the plight of teachers and how we can solve some of those problems. But I would hope that throughout these discussions we're going to realize that we have to work together or we're not going to get anything accomplished.

Linda Ruzich:

There have been some recurring themes in this program that seem to be the crux of what we are trying to accomplish in procuring a good education for our children. I'd like to address these from the perspective of a concerned parent. We, as parents, have certain rights and responsibilities when it comes to educating our children. We have a right to provide our children with as good an education as possible so they will be prepared not only to support their lives, but also to enjoy them. We have a right to be kept informed as to the condition of our schools, not only financially, but otherwise. We have a right to expect to be included in our children's educational process, from K-12, and we have a right to expect the funding for our children's education to be allocated in as efficient and beneficial manner as possible. We have a right to be treated with respect and acknowledged as having some skills that can help our children achieve the best that they can.

We also have responsibilities. To get other parents involved in our school system. To go to the legislators and expess our concern. To not only increase the amount of dollars, but to decide where those dollars will be spent. If we find problems in our schools, it is our responsibility to go to the teachers, the principals, the administrators, or the superintendent, to do whatever it takes, to remedy these problems. And we have the responsibility to teach our children not only respect for education, but a respect for those who teach. We have a responsibility to provide a conducive environment at home so the education process is an ongoing one. Our other responsibility is to try to get the media to present the positive aspects of our school rather than only the negative. We have the responsibility to encourage others in the community to support our school by passing our bond issues and our mill levies. We cannot assume that someone else is going to do this job for us. I don't believe that all parents do not care. I think, rather, that they are not informed as to the quality of education their children are receiving and as to how the monies are being spent. I think we have to be realistic in recognizing that not all parents will be moved or inspired, but that should not deter us from making sure that all children, not only those of concerned parents, but all children, have a good education.

This brings me to the responsibility of parents of handicapped children. These children are a special minority population in our schools whom we cannot allow to be ignored. Many of them will not master language. They may never even speak. They will not be able to use a computer or build a car, but they live in our society, and they have the same right to develop to their utmost potential. We, as parents of these children, have to assure that they are provided with this opportunity. The humanitarian factor has been referred to over and over again in the past few days. Let's remember this when dealing with our special kids. What better way to show other children and the rest of the world that we care not only for the most able, but also for the most disabled.

I don't have any specific answers because I'm not sure exactly where the problem lies. Some say it's the teachers, others say it's the

students, the families, the colleges, the administrators, the legislators, the lack of money, the lack of global language, and the lack of global interest. Maybe the problem is simply the lack of true commitment by many. I hope we can go out and each do our part, no matter what our role is, in strengthening and reconfirming this commitment.

Bill Anderson:

I recall the days when, as a teacher, as a principal, as a superintendent, we used to get into a car with our fellow educators, whether they were teachers, school board members, or parents, and we'd all go to the same meeting, hear the same things, and we'd discuss the same topics. And we used to come to some consensus. There used to be some awfully good input that modified our thinking. We didn't worry about who was going to run the school or anything else. We just assumed that the schools belonged to the parents and the children and the taxpayers, and that it was our job to do the best we could with what we had. We used to go to those meetings, and I can remember board members and parents standing up and strongly supporting education. Strongly supporting teachers' salaries, and strongly helping us get the job done. It seems as though in the last few years we've lost some of that ability to get together as educators. Who in the world hates education? Who in the world can really fight against educating children, in a nation such as ours that's so dependent on universal education, one of the few nations in the history of the world that has attempted universal education?

I think we've done an excellent job. And I think it's time to take credit for what we've done. The people do care about their schools. They're good schools. Our students are good kids, they come out of good homes. Some of those homes are not perfect, some of our schools are not perfect, and our training institutions are not perfect, but we can do a lot better if we start sharing our problems and supporting each other. When it comes to funding, I don't think we can any longer afford the luxury of throwing darts at each other. I hope we can get together. I hope that in this legislative session we can work with our senators, our representatives, the people who also support education, and that we can get the funding to do the kind of job that we must.

John Board:

I think we all have an idea of what people think of teachers and education, but I want to tell you what teachers think about some other people. In February we sent out a questionnaire to 7,500 teachers and received 4,339 replies. First we asked teachers to rank the support that they perceived they're getting. They perceived that they're getting the most support from their building principal — not from parents or anybody else, but from the building principal. This leads me to suggest, if I want to be a little radical, that maybe we should close down the central administration offices, not allow the school boards to meet, not let the legislature get involved in education, and turn education back to the teachers and the building principals. Then I think we might get some reform if we want reform.

Second, we asked teachers what they wanted the Montana

Education Association to do in order of priorities. First was to provide for the welfare of children. Second was salary. When it came to national support, they said the least support was coming from the President and Secretary Bell. From the state, the least amount of support came from the legislature, the governor, and the superintendent. And locally, the least support came from school boards and the press. I think that identifies some of the problems.

Now let me make some assumptions about public education. First of all, teaching is not a business. The operation of a school may be a business, but teaching is not a business. Teaching is more of an art. Second, I submit that education is not just for jobs. "Hope is the thing with feathers that perches in the soul, and sings a tune without the words and never stops at all. And sweetest in the gale is heard, and sore must be the storm, that could abash the little bird that kept so many warm." That's never gotten me a job, but at times it's kept me alive. So I propose that education is not just for jobs.

I would submit, too, that there will be no reform at all (if we're interested in reform) until some conditions are changed, until the students and the teachers are elevated to be number-one and the most important things in the school. You can tack on hours, you can do all kinds of things to us, but if you don't make those conditions better, there's not going to be good education.

Just about every speaker has talked about the importance of writing. I have not heard one person propose, however, a simple solution: If you're going to have good writing taught, those people teaching writing must have fewer people to teach. Period. To grade a paragraph for about 150 students is going to take ten hours a week. That's just one paragraph. When you have 150 students, you're not going to get it done.

It seems to me that we have misused the word "reform" in these discussions. We haven't been talking about reform; we've been talking about patching up an outdated industrial factory system. If you read only one publication, I want you to read *Educating for a New Millennium: The Views of 132 International Scholars.* Then I think you will see what we must do if we want to be prepared for the next century. The point of that publication is that the current system is not going to solve the problem. An industrial factory school system is not the school system for a technological information age, and we really need to address the problem of our schools. For instance, I am convinced that boxing kids into grades just because of their age does more to destroy self-worth and encourage juvenile delinquency that anything else. The bottom line is, if there isn't going to be the money for reform, then let's stop talking about it.

Margit Thorndal:

One of the challenges issued in this conference that is especially pertinent to us as Montanans is the challenge to train our students and children to become more active members of our world. It is essential that we instill a sense of community and world responsibility in our students in Montana. Dr. Hamblin spoke about the global crises we are facing. Montana needs to accept its share of the responsibility

for that and to consider itself as a part of the solution. Students must consider themselves participants in our society and not just consumers. Dr. Boyer spoke of instilling a sense of mission and community responsibility to help make our students more responsible citizens. I think we in Montana must especially compensate for our geographical isolation and our low population. Several means of accomplishing this have been suggested throughout the conference. Dr. Boyer spoke of periods of voluntary service for our students. For example, children need to learn the importance of caring for school grounds and school buildings before they can be concerned about our total environment. Students need to be involved in caring for the less fortunate in our communities before they're going to vote for some of the legislation or legislators who are advocating this at a national level. The teaching of polycultural awareness and knowledge is essential. The study of languages in addition to English is essential for conveying these attitudes. Understanding the legislative process and then fulfilling our civic responsibilities are essential in order to effect change. There have been other curriculum ideas, but in general, teaching our children to adopt attitudes of global citizenship is a theme that has come from many speakers in this conference and is one that I think is crucial.

Wayne Buchanan:

I think the central point of the reports that we've been looking at this last week, and that those of us involved in education have been looking at for the past several months, is that we have a crisis in education. As in any crisis, we have a tendency to treat the symptoms instead of trying to get down to the underlying problems. Let's look at some of the symptoms that we've talked about. They include low pay for teachers, discipline problems in our schools, and lack of adequate funding. And I could go on and on. I think it's very important that we resist the temptation to treat the symptoms instead of getting at the root problem. When we treat symptoms, as any physician will tell you, we only exacerbate the problem that's causing them.

Let's take the pay issue for teachers as an example. It would be an easy matter, and a number of schools have done this, to simply increase the pay of teachers. But the fact is that pay for teachers is a function of the marketplace. By that I mean that the public perceives that if they pay the salaries that are currently being paid, they will get individuals who they consider to be adequate to teach in an adequate manner in their schools. As a matter of fact, surveys bear this out. The public is generally happy with the schools and generally happy with the teacing that goes on in those schools. But to say that Custer would have done a lot better at the Battle of the Little Bighorn had his troops made a little more money is very much like saying that by increasing teacher pay we're going to solve the problems. The fact is, that is not going to happen.

A few years ago I applied for a job as a curriculum director. At the end of the interview I asked the superintendent, who happened to be a Ph.D. from the midwest, what single thing he would do to improve the education in that school district. The district happened

to be on an Indian reservation. He thought a minute and said, "Public involvement in the process of education." I think that is an indication of the difficulties underlying the problem. I fear that too often in education, after we circle the wagons we shoot inward.

I'd like to suggest very briefly some solutions that I think might get at some of the problems. We need more public involvement in the problems of education as well as the successes. We are going to have to begin to involve the public at an earlier stage rather than seeking their assistance only when we have successes that we can report. I think that we must center on bringing the lay element and the professional element in education together in a continuing dialogue. I think that we're going to have to get rid of collective bargaining. If there is a single hold-over from the industrial society, it's the process of collective bargaining. It's too divisive, too adversarial, and too destructive. We're going to have to find another means of solving our problems. I think we're going to have to restore in the public's mind the value of an education. It's been the national joke for too long. We're going to have to raise the total image of education in the eyes and minds of the public because we have and we rely upon a public education system. Without the involvement of the public, we are not going to get the job done. I think that this conference and other conferences are a start down the right road. I believe that the studies that we just concluded and that were included in our packets are a start. They provide far too few answers. We cannot just improve certain points that we consider to be symptoms. If we are going to improve education, we're going to have to improve its total image.

Kelly Addy:

One of the major points that came out of the presentations is that we li ve in an information age and that this has implications for education. The new technology that's available today makes time-shifting in education possible. For example, if you have a video cassette recorder you can watch the 5:00 p.m. news whenever you happen to get home. The same thing can be done with educational tapes, and I'm glad to see a minor explosion in that area. The information is out there; some of it is in cassette form or book form. I see the educational institution's role as helping the student put that information into perspective. I remember when I went to law school I was told that I would learn two things: how to think and where to find information. Fortunately, that turned out to be fairly true. I think that might be a little bit too cursory a description of the task before public education today, but it certainly gets us a ways down the road in that direction.

I think one of the most important recent books that puts things into perspective is *Megatrends*. It goes back to what Wayne was just saying about involving people in the process of decision-making. In a political campaign, for instance, you try to open up the process to get as much input as you can and to give everybody a stake in the outcome — and I think that's very true of almost any public institution and particularly true of education. I went to school at one of the most

fortunate times for education in America because it was when the baby boom kids were going through our institutions. Did education ever have a constituency! In every household there were at least two constituents of education because parents could see that education related directly to what they were trying to do then and now — to provide something better farther down the road. The fact that we have become such an information-rich society, such a diverse society — that we've even been able to time-shift our input to a certain extent — makes it harder for us to get together and exchange information at a public meeting. We simply don't have the "what meeting are we going to tonight?" mind-set. Yet we all need to get together; we all need to get involved at an earlier point in the process.

I think another one of the themes coming out of this conference is that we need to give our students more rewards for the work they do, and that the more work they do, the more rewards we need to provide them. Maureen Reagan was in town a few weeks ago and made a comment related to the women's movement that applies to education too. She said that people no longer are going to have one career and retire. People are going to have two, three, four, and five careers. The process of education is going to go on throughout a lifetime.

Let's shift back, say, to the first career for a lawyer. Recently the University of Montana Law School adopted a different format for its teaching. Essentially they've adopted the revolutionary method of 2,000 years ago, the Socratic method, and have developed a curriculum around something that approximates the kind of work that you can expect to do the first year you get out of law school. I think this is a really good idea, and it gives the students more of a feeling that their education is part of real life. They are maybe experiencing self-actualization a little more in the educational process. I think that's a very important development, and it's one that's going on in Montana today. As we can time-shift, as we can bring more technologies into play, maybe we can do that even more.

In 1970, Henry Steele Commager came to Montana State University, where I was a student at the time. One of the comments he made has stuck with me ever since. He was speaking of universities, but let's hope we can apply it to schools some day. He said that good universities have great administrators, excellent universities have great faculties, and great universities have great students. If we can do the best we can to unlock people's potential at an early age and let the students set the parameters of their learning rather than have the attitude that when we've finished this chapter we're done for the day, I think we'll see some tremendous changes take place in education. I think we're living in an information age that could be even more exciting than we see it from here.

Irving Dayton:

One of the things that occurred to me in terms of common themes is the notion of working together and establishing a consensus rather than an adversarial relationship. It made me think a little bit about the very high priority Americans have given education historically.

Harvard was founded very soon after the pilgrims arrived in this country. As the west was won, almost as soon as people had secured their physical safety, they immediately built a schoolhouse, started a library, and sent back east for a schoolmarm. Traditionally, the real priority in the community was the education of children, and it was assumed that in a democratic society, everyone was going to have an education. Somehow, although that sense is still there, a lot of other things have come to the fore that compete for resources in terms of energy, time, attention, and funding. One has to say that we measure our priorities not by what we talk about, but by where we put our resources. This, of course, is the problem that the legislature faces. They are in the business of defining the state's priorities as they allocate the state's budget.

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Summary, Question/Answer Period

1. If significant change in education is to come about, we must involve the public at large.

2. We are all aware of the fact that we have an increasing proportion of older citizens in our total population in America, and that many in this group have no direct ties with our schools. We also have a significant number of singles. We must face up to the fact that many of these people who do not support increased mill levies are not against education. We are living in economic times when many people feel they just can't afford higher taxes. Many people are on fixed incomes and struggle to live month by month. Additional tax burdens are very, very unpopular. However, we need not look at this segment of our society as the enemy. They are merely looking out for their own survival.

3. Large numbers of teachers are leaving the profession for a variety of reasons. One major issue has been poor salaries. Nationally, teachers' salaries compared with all other professional groups and even blue-collar workers have been extremely low. In addition to low salaries, teachers have had placed upon them more and more responsibilities that have effected an increasing number of teacher burn-outs. It has been predicted that a national teacher shortage will prevail in the 1990s.

4. Today we are living in an advanced technological society. The world is changing at an ever-increasing pace. Not too many years ago a person could complete a college education, obtain a job, and expect to feel secure for life. Not today. Jobs become obsolete, and new jobs that did not exist a year or so ago are features of our rapidly changing technological society. We must accept the fact that lifelong learning is necessary for survival. This requirement of life today and in the future will have a tremendous impact on the educational needs of our society and on the delivery system for education that our schools will have to provide.

5. We need new, creative ways of financing our schools. To be sure, it has been pointed out time and time again that more money is needed to do the job today. However, as one Montana state senator remarked, how deep is the well? If funding is the critical problem and we're not willing to make state budget cuts somewhere else, which it doesn't look like we're willing to do, and costs continue to escalate, then we're going to have to find another source of money.

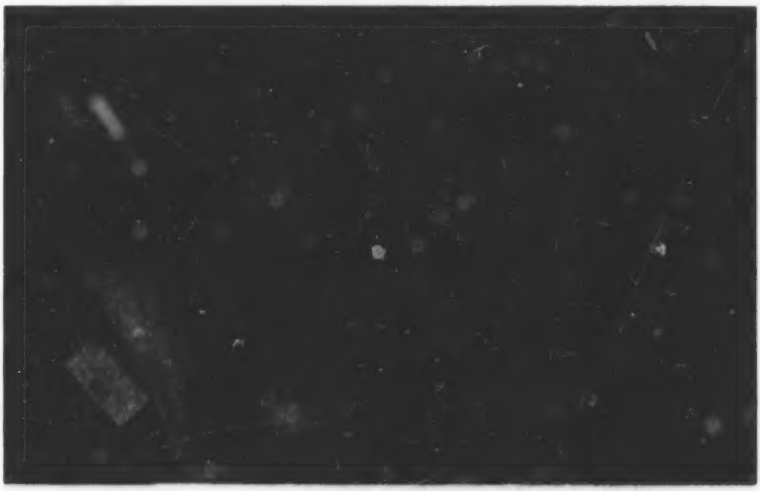
6. A school board member stated that financing public education is not only a state problem, but a local problem too. He commented, "It always amazes me that on the fourth Monday in July when we pass that budget, nobody's there!"

7. There is a critical need to reeducate the population that education needs to be supported. It's a decision taxpayers must make; we can't

leave this important decision up to the legislators and school boards. The people must become informed and active.

8. It seems that most of us at this conference would agree that schools have served our society rather well over a long period of time. A lot of America's progress can be attributed to our school system. We also agree that there are many things that we need to do better and some things that we need to do that have not been done. We may need some reorganization of our schools. The many recent reports criticizing American education have opened a window of opportunity for educators in the last year or so. As a result of these national reports, governors, state superintendents, legislators, school boards, and citizens at large have begun to become actively involved in and concerned about their school programs. If we can continue to involve the American people in education from kindergarten through Ph.D. programs, then we, the taxpayers, will know where we want to put our money. We are a society that is demanding more and more from our government. Therefore we must prioritize our demands, because funds are limited.

9. From all the superb recommendations that came forth from Dr. Boyer, Dr. Crosby, and the other speakers, it appears that all of us in attendance at this conference — teachers, administrators, parents, business representatives, students, and politicians — can return to our own communities and take positive steps to help improve the educational opportunities provided in our schools. We here at this conference are committed to the idea of resolving the crisis in education that we have talked about for three days. We now must be willing to take action ourselves. We have the potential to take the initiative, each one of us, but if we sit back and simply have conferences and then return to our own communities, we will see conditions continue as they have in the past. We need not be a nation at risk.



Biographies, Keynote Speakers

Ernest L. Boyer

Ernest L. Boyer is President of the Carnegie Foundation for the Advancement of Teaching, Princeton, New Jersey. Before joining the Carnegie Foundation in 1980, Dr. Boyer served as the twenty-third U.S. Commissioner of Education, administering a $12 billion federal budget. For seven years (1970-1977) Dr. Boyer was Chancellor of the State University of New York (SUNY). As head of the largest university in the United States, he directed a system of sixty-four institutions with over 350,000 students.

Dr. Boyer has been the recipient of many honors. He holds honorary degrees from forty-eight United States colleges and universities. In 1983 in a national survey he was selected by his peers as the leading educator in the nation and was awarded the William Moss Institute award. For five consecutive years he has been listed by *U.S. News & World Report* as one of the top educators in the nation. In 1971 he was awarded the President's Medal from Tel-Aviv University.

Dr. Boyer was named by three Presidents of the United States to national committees: the National Commission on the Financing of Postsecondary Education, the President's Advisory Council on Women's Educational Programs, and the President's Commission on Foreign Language and International Education. He also has served as a member of the Commission on Critical Choices for Americans.

Emeral A. Crosby

Emeral A. Crosby has served as Principal of Northern High School, Detroit, Michigan, from 1970 to the present. His honors include being named as one of sixty effective high school principals nationally. Dr. Crosby has served on many prestigious national commissions, panels, and advisory groups which include: the National Commission on Excellence in Education, the Advisory Panel for the Carnegie Foundation on the Study of the American High School, Advisor for Abt Associates on Study of the Selection Process for Principals, Advisor to the James Lowery Research Firm for the U.S. Department of Education, Consultant to the Governor of Tennessee on the Master Teacher Plan, and Consultant to the U.S. President on the Master Teacher Plan. A former English teacher and assistant principal, he has been a practitioner in the schools since 1958.

Francis N. Hamblin

Francis N. Hamblin served in the field of higher education wit h distinction for more than three decades, from 1948 to the present. He was the Dean of the College of Education at Ohio University, 1955-1963; Academic Vice President at Northern Arizona University, Flagstaff, Arizona, 1967-1970; and President of Lock Haven State College, Lock Haven, Pennsylvania, 1970-1982. Dr. Hamblin has devoted special attention to the field of international education, and has served on numerous councils and committees on international education, including working as chairperson for the International

Relations Committee of the American Association of Colleges for Teacher Education.

Lyn Gubser

Lyn Gubser has been Executive Director of the Association for Educational Communications and Technology (AECT) since 1983. The AECT, which represents some 14,000 professionals nationwide, is the only national, professional association dedicated to the improvement of instruction through media and technology. Dr. Gubser was formerly Executive Director of the National Council for Accreditation of Teacher Education (NCATE), a position he held from 1978 until 1983. As NCATE's director, Gubser supervised accreditation evaluations at some 600 American colleges and universities. From 1975-1977 he was Dean of the College of Education at Western Illinois University.

Lee Noel

Lee Noel has been a teacher, campus administrator, and lecturer in higher education. He has become a nationally recognized authority on college student retention, and *The Chronicle of Higher Education* has identified him as a "pioneer" in this area. As Executive Director of The ACT National Center for the Advancement of Educational Practices, Dr. Noel has directed the following national studies: National Survey of Academic Advising (1982), Campus Services for Underprepared Students (1981), Adult Recruitment Practices (1981), Campus Organization for Improved Student Retention (1981), and Attracting and Retaining Adult Learners (1980). Dr. Noel has conducted over 50 national conferences attended by 7,500 college administrators and faculty from 1,500 campuses. He has served as a guest lecturer/keynote speaker at more than 100 national meetings, and he has provided campus retention and advising consultations to more than 200 institutions.

Roxanne Bradshaw

Roxanne Bradshaw, a psychology instructor at Pike's Peak Community College, Colorado Springs, was elected Secretary-Treasurer of the National Education Association at its 1983 convention. As one of three top executive officers of the nation's leading education organization, with 1.7 million members, Bradshaw oversees a budget of more than $83 million.

A native of Colorado, she represented that state's NEA affiliate, the Colorado Education Association, on the national NEA's Board of Directors for six years, from 1976-1982. She served a seventh year as national higher education representative on the NEA board in 1975 and 1976. She has also been a member of the NEA Program and Budget Committee for five years, from 1976 to 1981. Currently she is on leave from Pike's Peak Community College, where she served for thirteen years on the college faculty association in various posts.

Conference Program

A CRITICAL EXAMINATION OF AMERICAN EDUCATION:

A Time for Action

June 18, 19, 20, 1984
Eastern Montana College
Billings, Montana

This Conference is sponsored by:

Eastern Montana College
Eastern Montana College Foundation
Office of Public Instruction, State of Montana
Montana American College Testing Program
Associated Students of Eastern Montana College
Northern Rockies Consortium for Higher Education (NORCHE)
Governor Ted Schwinden, State of Montana

JUNE 18, MONDAY
8:00 a.m.
Welcome
Benedict J. Surwill, Dean, School of Education, Eastern Montana College, Conference Chairperson
Bruce Carpenter, President, Eastern Montana College
The Honorable Ted Schwinden, Governor, State of Montana

FIRST GENERAL SESSION
8:45-9:45
A Critical Examination of American Education
Ernest L. Boyer, President, The Carnegie Foundation for the Advancement of Teaching

9:45-10:15
Coffee Break

10:15-11:00
Panel of Reactors
Moderator: Vic Miller, General Manager, KTVQ TV, Billings
1. E.K. Fretwell, Chancellor, University of North Carolina at Charlotte
2. Ron Nistler, Principal, Billings West High School
3. Joe Presley, President,

Westmoreland Resources, Billings
4. Bob Brown, Montana State Senator, Whitefish
5. Sam Rankin, Academic Vice President, Eastern Montana College

11:15-12:00

Small Discussion Groups

12:30-2:00

Luncheon Meeting —
Moderator: K. Schipper, KEMC Radio, Eastern Montana College
Small discussion groups will have the opportunity to direct one or two questions to Dr. Boyer or to the Panel of Reactors.

SECOND GENERAL SESSION
2:30-3:30

Future Directions for American Education
PRESENTORS
1. Julie Coleman, Vice President for Investments, Dean Witter Reynolds, Inc., Billings
2. Ricardo Garcia, Chairperson, Division of Elementary/Secondary Education, School of Education, Eastern Montana College
3. Mary Johnson, President, League of Women Voters of Billings
4. Sarah Listerud, Member, Montana State Board of Public Education, Wolf Point, Montana
5. Jim Longin, President, School Administrators of Montana, Helena
6. Jeff Morrison, Chairperson, Montana University System Board of Regents.
7. William Poston, Jr., Superintendent, Billings Public Schools

3:00-3:30

Coffee Break

4:00-5:00

Moderator:
Richard Wesnick, Editor, *Billings Gazette*

JUNE 19, TUESDAY
8:00 a.m.

Opening Remarks

THIRD GENERAL SESSION
8:15-9:15

A Nation at Risk
Emeral A. Crosby, Member of the National Commission on Excellence in Education and Principal, Northern High School, Detroit, Michigan

9:15-9:45

Coffee Break

9:45-10:45

Panel of Reactors
Moderator: Dave Rye, News Director, KULR TV, Billings
1. Irving Dayton, Commissioner of Higher Education, Montana University System, Helena

2. H.W. Swede Hammond, Montana State Senator, Malta
3. Russ Hart, Chairman of the Board, Hart-Albin Company, Billings
4. Esther Bengston, Montana State Representative, Shepherd
5. Ed Argenbright, Superintendent of Public Instruction for the State of Montana, Helena
6. Mark Jones, President, Billings Education Association

11:00-12:00

Small Discussion Groups

12:30-2:00

Luncheon Meeting
Small groups will have the opportunity to direct one or two questions to Dr. Crosby or to the Panel of Reactors

FOURTH GENERAL SESSION

2:30-3:15

What Are the Global Stakes?
Francis N. Hamblin, Former Chairman, AACTE Commission on International Relations

3:15-4:00

Instructional Technology and Educational Reform
Lyn Gubser, Executive Director, Association for Educational Communications and Technology

4:00-4:30

Coffee Break

4:30-5:15

Panel of Reactors
Moderator: Bud Iwen, United Press International, Montana Manager, Helena

1. Cal Winslow, Montana State Representative, Billings
2. Svein Oksenholt, Professor of Germanic Languages and Literatures, Eastern Montana College
3. Jeanne Eder, Coordinator, Native American Studies, Eastern Montana College
4. Kathie Kirkpatrick, Assistant Principal, Lewis and Clark Junior High School, Billings
5. Leonard Kaplan, Professor of Education, Wayne State University, Detroit, Michigan
6. Lyn Whitmer, Teacher, Lockwood, Montana
7. Carrol Krause, Deputy Commissioner for Academic Affairs, Montana University System, Helena

5:15-5:45

Questions from the audience

JUNE 20, WEDNESDAY

8:00 a.m.

Opening Remarks

FIFTH GENERAL SESSION

8:15-9:15

Increasing Student Competence — An Emerging Indi-

cator of Educational Excellence
Lee Noel, Executive Director, The ACT National Center for the Advancement of Educational Practices

9:15-9:45
Coffee Break

9:45-10:45
Moderator: Hugh Van Swearingen, Chief of Bureau, Associated Press, Helena
1. Gary Johnson, Head Counselor, Billings Senior High Schoool
2. Roberta Snively, Superintendent of Schools, Big Horn County, Montana
3. Buzz Christiansen, Superintendent of Schools, Yellowstone County, Montana
4. John E. Whooley, Associate Dean, School of Education, University of Wisconsin, Eau Claire, Wisconsin
5. Fred Deigert, President, Valley Medical Society, Billings

10:45-11:45
Questions from the audience

12:30-2:00
Coming Together for Excellence
Luncheon Speaker:
Roxanne Bradshaw
Secretary-Treasurer
National Education Association
Questions from the audience
Moderator: Ken Woosley, Director, News Media Services, Eastern Montana College

FINAL GENERAL SESSION
2:30-3:30
The Reports Are In. Where Do We Go From Here?
Panel of Reactors
Moderator: Irving Dayton, Commissioner of Higher Education, Montana University System, Helena
1. Bill Anderson, Deputy State Superintendent of Public Instruction, Helena
2. Karen Trask-Doolen, School Board Member, Billings Public Schools
3. Kelly Addy, Montana State Representative, Billings
4. Bruce Crippen, Montana State Senator, Billings
5. Wayne Buchanan, Executive Director, Montana School Boards Association, Helena
6. Linda Ruzich, Parent, Billings
7. Margit Thorndal, Teacher, Fred Graff Grade School, Laurel, Montana
8. Diane Parent, Vice President, District #4 PTA, Billings
9. John Board, President, Montana Education Association, Helena

3:30-4:15
Questions from audience

4:15-4:30
Wrap-up
Benedict J. Surwill
Dean, School of Education, Eastern Montana College, Conference Chairperson